

PROGRESS REPORT • FALL 2023

SUSTAINABLE SOLUTIONS FOR A CHANGING WORLD



LOYOLA
UNIVERSITY CHICAGO



It has been a year of growth and renewal at Loyola University Chicago's School of Environmental Sustainability (SES).

During the 2022 to 2023 academic year, we reached our highest enrollment level yet, with more than 500 active undergraduate and graduate students. We saw revitalized activity on campus as the world emerged from the COVID-19 pandemic. Our annual Climate Change Conference took place in person for the first time since 2019. More than 260 people attended, and over 400 people tuned in online. Throughout the year, students enjoyed social gatherings and study abroad programs and participated in engaged learning activities in our community.

As the academic year begins, we are on track for another solid year in terms of enrollment. We are expanding our educational offerings and launching a new bachelor's degree program in environmental economics and sustainability. The program will explore the connections between economic forces, society, and the natural environment, equipping students to contribute to more just and sustainable economic and social systems.

As we advance, we also aim to strengthen and expand our research groups. Each group includes faculty members, staff, and students focused on one of five environmental themes: biodiversity, environment and society, environmental health and toxicology, sustainable food systems, and climate and energy. We are working toward hiring a post-doctoral fellow who will accelerate our research initiatives and help expand our impact.

The new academic year brings new faculty members to SES, and I am thrilled to welcome several outstanding researchers and educators. Two new tenure-track faculty members, Gordon Getzinger, PhD, and Amber Roegner, PhD, bolster our research and teaching capacity in environmental health and toxicology. They are experienced investigators with extensive expertise in environmental chemistry, toxicology, and public health. In addition, Debjani Ghatak, PhD, and Mark Mackey, SJ, MS, joined us as teaching faculty members, bringing enormous talent and energy to our classrooms.

On the administrative side, Christine Hippert, PhD, came to SES this summer from the University of Wisconsin-La Crosse. As associate dean of faculty, she supports faculty administration and professional development activities. Karen Schauwecker, MS, comes to SES from Southern Illinois University and serves as our first student engagement manager for undergraduate and graduate students. In addition, Kara Doszkewycz joined the staff as our senior business manager.

I look forward to many more developments over the coming years and to continuing to connect with our growing community of students, faculty, staff, alumni, and supporters.



Nancy C. Tuchman, PhD
Founding Dean

PROGRAM GROWTH



Serving a growing student community

During the 2022 to 2023 academic year, a total of 160 students completed degree and certificate programs in the School of Environmental sustainability, our largest graduating class yet. SES awarded 112 bachelor's degrees, 38 master's degrees, 10 graduate certificates.

Undergraduate programs

Undergraduate enrollment in SES continues to grow, with 434 students enrolled for fall 2023. To meet our students' needs, SES is expanding our academic offerings. Students can now choose from seven majors, including our newest BA program in environmental economics and sustainability. The curriculum for this major connects environmental and social problems to business theories and economic analysis.

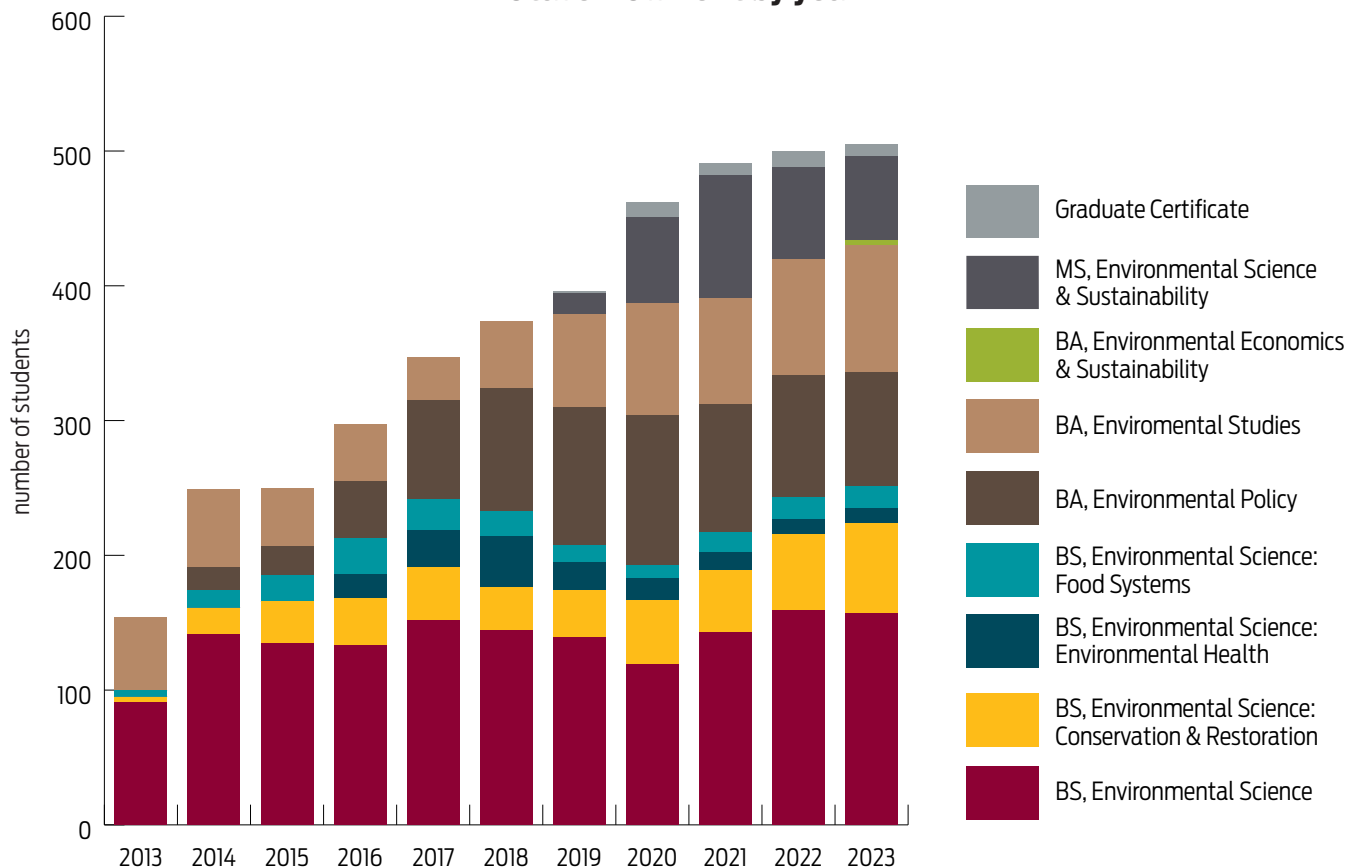
Graduate programs

SES launched the Master of Science in Environmental Science and Sustainability program in 2019, and 62 students are enrolled for fall 2023. Students can pursue a professional track or a research track. Loyola's accelerated bachelor's/master's programs allow students to complete both their undergraduate degree and a master's degree in just five years. SES also offers three graduate certificate programs that equip students with valuable skills.

505 students enrolled in SES for the fall 2023 semester

160 degrees and certificates awarded during the 2022 to 2023 academic year

Total enrollment by year

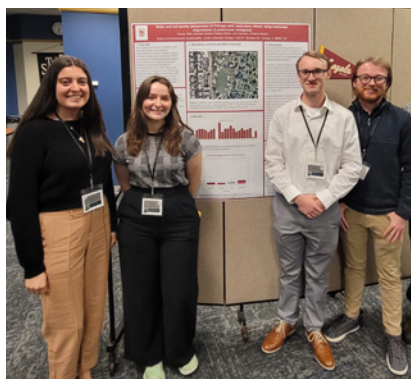


Beyond the classroom

Education in SES extends beyond the conventional classroom. Students make the most of diverse opportunities to enrich their education through applied research, volunteer activities, and student-driven sustainability projects. In the process, they positively impact the University and the community.

Active researchers

Many SES undergraduate and graduate students are active researchers. They work with faculty mentors on projects that advance environmental science and prepare them to become independent investigators.



Environmental toxicology students contribute to local ecological restoration

In the fall of 2022, students in the Chemistry of the Environment course went with their instructor to study soil and water quality in Chicago's West Ridge Nature Park. Four students—Marinda Vacanti, Kyleigh Miklos, Connor Olds, and John Gorman—continued the work beyond the assigned course activities. The students analyzed water samples from the park's 4.5-acre pond and tested the surrounding soil for nutrient content and heavy metals. Their preliminary results revealed phosphate, iron, ammonia, and chromium levels significantly outside the EPA's recommended ranges. The students presented their research at the Midwest Society of Environmental Toxicology and Chemistry conference and Loyola's Undergraduate Research and Engagement Symposium. Their efforts could help inform future ecological restoration efforts.



Mikayla Ballard studies invasive crayfish in Chicago-area waterways

Mikayla Ballard, a senior in environmental science and biology, has been interested in aquatic ecology research since high school. She knew she wanted to pursue environmental science at Loyola. In her sophomore year, she connected with mentor Reuben Keller, PhD, with whom she had taken an environmental statistics course. Mikayla joined his lab, which focuses on aquatic invertebrates. She contributes to Keller's investigations and works on individual projects. Her most recent project examines the impacts of invasive crayfish in the North Shore Channel, an artificial channel that connects the Chicago River to Lake Michigan.



Kristina Tsakos investigates wetland conservation

Kristina Tsakos, a 2023 graduate in environmental science, discovered her passion for research during her time at SES. She joined Team Typha, a research group focusing on invasive cattails and wetland restoration. One of her projects investigated the use of biochar for remediating road salt pollution. Kristina's dedication and achievements were recognized through awards such as a two-year Carbon Fellowship for STEM research and a Wetland Scientists Student Award. After graduation, she plans to continue her research, pursue a master's degree, and work in stream restoration and fisheries.

Outstanding graduates

Meet four of the many 2023 graduates who received school and university honors for their academic accomplishments and contributions to sustainability and social justice.



Cosette Ellis

BA in environmental studies

Cosette Ellis received the President's Medallion, an award that honors one Loyola student from each school or college who demonstrates exemplary leadership, scholarship, and service. Cosette was co-president of the Student Environmental Alliance and chief sustainability officer for the Student Government of Loyola Chicago. She helped organize a student summit as part of the 2021 Loyola Climate Change Conference and spoke at the SES 2023 commencement ceremony.



Carolyn Bidó

MS in environmental science and sustainability

Carolyn Bidó received the Hazel M. Johnson Award for her leadership, academic excellence, and extracurricular achievements as a graduate student. She participated in the Abrams Sustainable Business Challenge and was part of the team that won third place for their concept for reusable steel actuators for inhalers. As a master's degree student, Carolyn demonstrated a passion for environmental advocacy and encouraged and inspired fellow students.



Ericka Gonzalez Guzman

BS in environmental science: food systems and sustainable agriculture

Ericka Gonzalez Guzman received the Wangari Muta Maathai Award for her exceptional service and dedication to sustainability and social justice. She was one of five student leaders who founded the Eco-Warriors eco-anxiety support group, helping to plan how this group could serve SES students. While on campus, Ericka also worked as a team leader in the Urban Agriculture Program, serving as a compassionate and inspiring mentor for other students.



Connor Bishop

BA in environmental policy, BA in political science

Connor Bishop received the James E. Hansen Award for his outstanding work as an intern in the Office of Sustainability. During his two years in this role, Connor supported initiatives such as Zero Waste Games, paper towel composting, and the Cycle and Recycle Center, making vital contributions to sustainability efforts on campus.

Careers that make a difference

SES graduates do work that makes a positive difference for people and the planet. Meet three alums whose SES experiences led to rewarding careers in sustainability.



Maggie Nykaza

Maggie Nykaza graduated in 2018 with a major in environmental science: food systems and sustainable agriculture and a minor in French. Maggie worked as an Urban Agriculture Program intern from her sophomore year through her senior year. The experience helped her expand her understanding of food systems and their impacts on our health, communities, and the environment. Maggie now works as the **garden communications manager at The Organic Gardener, Ltd.** in Northbrook, IL. The business builds and maintains organic vegetable gardens throughout the Midwest for residential clients, prominent companies, and schools. Maggie enjoys working in an industry she is passionate about. She also loves knowing that her work positively impacts many individuals and their relationships with sustainable food.



Zach Samaras

Zach Samaras discovered a passion for waste management while in the SES master's degree program. He now works as a **technical assistance engineer at the Illinois Sustainable Technology Center**, helping companies and organizations find new ways to minimize waste. Zach said his SES experience prepared him to work with people and businesses to solve sustainability challenges. He emphasized the impact of two courses, Human Dimensions of Conservation and Sustainable Systems: Social Perspectives. "In those classes, I learned about surveying and focus groups, which is what I do now in my current job. I also learned that you can't force change onto others. We have to listen and learn from them in order to help them," Zach said. "I still look back at some of my old textbooks and notes from those classes to determine the best way to approach a sustainability challenge and find a solution that works for all parties involved."



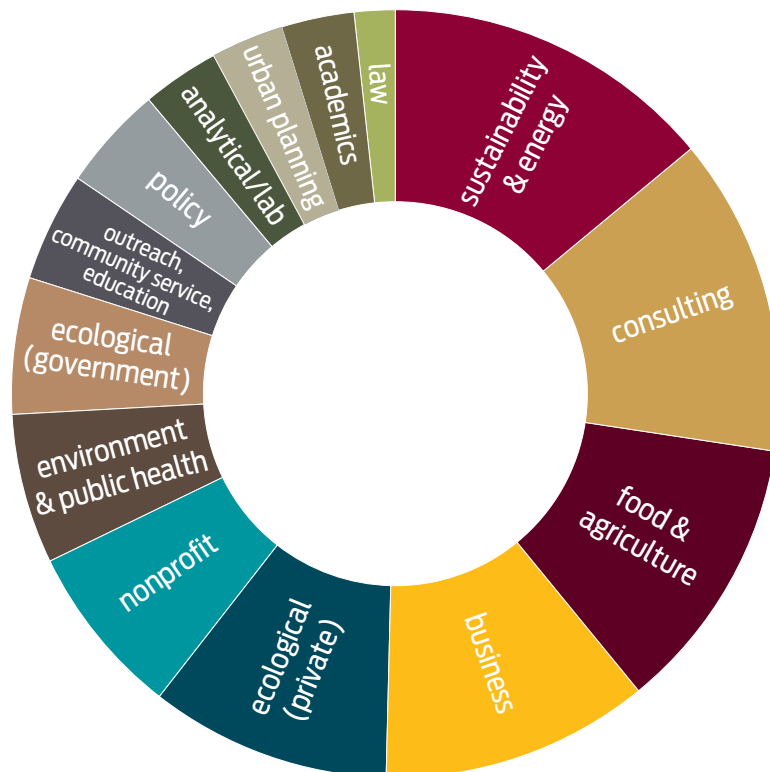
Carter Cranberg

After graduating from the University of Iowa with a bachelor's in environmental science, Carter Cranberg found his calling in the SES master's degree program in environmental science and sustainability. Under Associate Professor Reuben Keller's mentorship, Carter researched aquatic plants and crayfish in local ponds, a study that extended beyond his graduation. His graduate school experience honed his critical thinking and project management skills, positioning him for success in his current role as a **project officer at the US Environmental Protection Agency (EPA)**. In this position, he combines his environmental science knowledge with financial acumen to help state and tribal groups secure EPA grants for clean air initiatives. Carter has adapted to the complexities of government work and thrives on collaborating with fellow environmental enthusiasts.



Opportunities across sectors

SES prepares students for meaningful careers in many fields, including business, government, energy, nonprofit, education, agriculture, public health, and more. The graph to the right shows some sectors where our graduates work today. The sizes of the wedges indicate the percentages of graduates working in each area.



Outstanding educators and researchers joining our team

The School of Environmental Sustainability's faculty continues to grow. Meet the new faculty members who joined SES during the 2022–2023 academic year and in the fall of 2023.



FALL 2022

Marlene Brito-Millán, PhD

Marlene Brito-Millán joined SES in the fall of 2022 as an assistant professor of ecology. She earned her PhD in oceanography/marine ecology at Scripps Institution of Oceanography, UC San Diego. Before coming to Loyola, she completed a Ford Foundation Postdoctoral Fellowship jointly at Northwestern University and the Universidad Autónoma de Guerrero. Her research efforts are primarily based in Mexico, where she is advancing solidarity science projects alongside Indigenous Campesinos of the mountain region of Guerrero. Brito-Millán finds passion in teaching subjects such as critical ecology, environmental justice, and indigenous ecologies.



Sarah Ku, PhD

Sarah Ku is an assistant professor of sustainable business management with a joint appointment in SES and Quinlan School of Business. Her research examines sustainability and equity in business, and she is interested in organizational food waste, circular strategies through biomimicry, and incorporating insects as innovative opportunities for sustainable companies. Before moving to Chicago, Ku completed her PhD in international business and marketing at Georgia State University. She is committed to serving as a conduit between sustainability and business and fostering a positive classroom environment through teaching by example.



Jose Martin Montoya Dura, FSC, PhD

Lecturer Jose Martin Montoya Dura earned a PhD in educational theory and community development from the University of Valencia in 2010 and an MBA in sustainability, strategic vision, and communication from Lewis University in 2018. He values and demonstrates a service-learning approach to education, helping students develop skills through active participation in sustainability, social justice, and community-building efforts. Montoya serves as the faculty coordinator for the Abrams Sustainable Business Challenge.



FALL 2023

Christine Hippert, PhD

Christine Hippert joined Loyola in the summer of 2023 as the School of Environmental Sustainability's new associate dean of faculty. Hippert is a cultural anthropologist holding a PhD in anthropology and an MPH in behavioral and community health sciences. With expertise in the anthropology of food, medical anthropology, and issues of gender, race, ethnicity, citizenship, and human rights, she brings a wealth of knowledge to her role. Hippert is passionate about fostering global perspectives and promoting cultural understanding among students and has taught various anthropology courses and led study abroad programs in Latin America and the Caribbean.



Gordon Getzinger, PhD

Gordon Getzinger is an environmental chemist who graduated from Loyola in 2010 with a BA in chemistry and a BS in environmental science. He earned his PhD from the Nicholas School of the Environment at Duke University in 2016 and returned to Loyola this fall as an assistant professor of environmental chemistry. Getzinger brings valuable insights to his new position from his diverse background in research, consulting, and academia, including roles at Biobot Analytics and Exponent. His current research projects utilize cutting-edge analytical chemistry tools to understand sources, fates, and impacts of organic pollutants in aquatic environments.



Debjani Ghatak, PhD

Dr. Debjani Ghatak, an accomplished climate scientist with a PhD in earth and environmental sciences, joined SES as a lecturer in the fall of 2023. Ghatak brings a wealth of knowledge to her new role with her interdisciplinary background and expertise in Arctic climate, land-surface snow-atmosphere interaction, hydro-climatic issues in South Asia, and environment-human interaction. Driven by a passion for teaching and mentoring, she aims to create a respectful and open environment for students while fostering a deeper understanding of Earth-system science and climate change. Ghatak looks forward to engaging with students on impactful research projects within SES.



Mark J. Mackey, SJ, MS

Mark J. Mackey is a Jesuit brother and an ecologist. He previously taught in SES in a temporary position and became a full member of the faculty in the fall of 2023, taking a position as a lecturer. In college, Mackey followed his passion for nature and animals by majoring in zoology and environmental science. He studied the impacts of pesticides on frog metamorphosis. He continued to pursue these interests in graduate school, investigating how golf courses affect headwater stream ecosystems in the southern Appalachian Mountains. As a Jesuit, Mackey is interested in how learning about natural history can enhance one's relationship with the natural world.



RESEARCH

Restoring biodiverse wetlands in the Great Lakes region

At the northern tip of Michigan's lower peninsula, researchers from Loyola University Chicago's School of Environmental Sustainability are devising new methods of restoring high-quality, biologically diverse wetlands.

STORY BY **STEPHANIE FOLK** • PHOTOS BY **LUKAS KEAPPROTH**

Assistant Professor Brian Ohsowski, PhD, and Research Associate Shane Lishawa, MS, lead Team Typha, a research group focused on combatting invasive plants that disrupt wetland ecosystems and crowd out native species. The researchers aim to develop a scalable management strategy to restore high-quality habitats for birds, fish, and other wildlife.

They recently secured over \$1.1 million in federal funding for a large-scale project that could inform wetland management practices throughout the Great Lakes region. The project, funded through the Great Lakes Restoration Initiative (GLRI), is the latest development in work that started more than 20 years ago.

At that time, Nancy Tuchman, PhD, founding dean of SES, was a professor in Loyola's Department of Biology. Tuchman led a research team based at the University of Michigan Biological Station in northern Michigan, 24 miles south of the Mackinac Bridge. She and her master's degree students had noticed that a new, aggressive cattail hybrid was taking over nearby Cheboygan Marsh.

Typha × glauca (*Typha*) is a cross between a non-native cattail and a native species. The hybrid plant tolerates a wide range of conditions and proliferates rapidly. As a result, dense stands of the large cattails, reaching more than 10 feet tall, can quickly dominate a marsh ecosystem. *Typha* also leaves a tremendous amount of leaf litter, which builds up over the years. Tuchman's research revealed that the accumulating biomass was driving changes in the physical structure of wetlands to the detriment of native plants and animals.

Both Lishawa and Ohsowski first met Tuchman when they were working and



Shane Lishawa (center) is developing strategies to manage invasive cattails and restore wetland biodiversity in the Great Lakes region.

studying at the Michigan Biological Station—Lishawa in 1999 when he was an undergraduate at the University of Michigan, and Ohsowski in 2005 as a graduate student at Eastern Michigan University.

Lishawa went on to earn his master's degree in forest ecology from the University of Vermont. He returned to field research in Michigan as a Loyola research associate in 2008. Building on Tuchman's research, Lishawa started exploring strategies for managing *Typha*. He conducted a small-scale experiment removing cattails and leaf litter in randomly selected one-meter-square plots in a *Typha*-dominated wetland.

"A year later, we came back and looked at the response in the plots, and we found a bunch of native plants sprouting. So that was encouraging, but it was super small scale," said Lishawa.

That initial research provided the data needed to win funding for more extensive experiments. In 2010, Lishawa

and Tuchman received the team's first GLRI grant. With that support, they ran tests at multiple sites and experimented with several techniques for battling invasive cattails. In one approach, the team removed the entire *Typha* plant, including the below-ground rhizomes. This method produced dramatic results.

"It was just amazing," said Lishawa. "The first time I went into one of these plots, we had a garden of native plants sprouting from this place where we'd removed the cattails."

Results from these first large-scale studies led to a second Lishawa and Tuchman GLRI grant in 2013. With this grant, they bought a mechanical harvester and experimented with cutting the cattails above the water level in 60-by-60-meter plots. This approach was less effective than physically removing the entire plant, including the underground rhizome. However, digging up the rhizomes was prohibitively labor-intensive, so they tried another strategy.



Brian Ohsowski (left) leads Team Typha along with Shane Lishawa. Training future researchers is a core component of his work.

To test another approach, the researchers bought equipment that cuts the *Typha* below the water level. Multi-year experiments showed that this method was effective in restoring plant diversity, and because they used a mechanical harvester, it had the potential for large-scale application.

At this stage, Lishawa connected with Eric Dunton from the U.S. Fish and Wildlife Service (FWS). Dunton is the wildlife biologist for the Shiawassee National Wildlife Refuge near Saginaw, Michigan.

In collaboration with Dunton, Lishawa tried below-water cutting in sections of Shiawassee dominated by invasive cattails and studied how the native plants responded. The experiment confirmed the benefits of this method, and the work continued to expand from there.

Ohsowski joined the Loyola faculty in 2015 after completing a PhD in biology at the University of British Columbia. He and Lishawa soon joined forces as leaders of Team *Typha*. Together, they won additional funding, hired more student research assistants, and purchased equipment that allows for larger projects, including more projects with the Fish and Wildlife Service.

As the scale of the work grew, the team needed to find a beneficial use for the biomass they collected while cutting the cattails. Ohsowski is interested in biochar, which sparked an idea for a solution.

Biochar is a charcoal-like substance produced by heating organic materials in an oxygen-free environment. Without oxygen, the material burns clean and forms a carbon-rich final product rather than releasing carbon into the atmosphere.

Biochar is known to chemically bind vital plant nutrients such as nitrates and phosphates—a quality that could be valuable for reducing the spread of *Typha* invasions.

Runoff from farm fields increases nutrient availability in wetlands, creating conditions ideal for nutrient-hungry *Typha*. Applying biochar to invaded wetlands could reduce nutrient availability and improve water quality for native plants that thrive under less nutrient-rich conditions. Team *Typha* has done small-scale projects using biochar in wetlands, and the results have been promising.

The group incorporated this idea into a proposal for a large-scale experiment at the Shiawassee National Wildlife Refuge. They proposed harvesting *Typha* in large sections of the refuge, converting the

cut plant material into biochar on-site, and applying it to the wetlands to test the possible benefits. In addition to its potential for restoring biodiversity, this strategy has advantages related to climate change. Biochar is a carbon-rich material that is resistant to microbial and physical breakdown in soil for hundreds of years. Furthermore, creating biochar on-site cuts transportation-related emissions.

This summer, Team *Typha* secured over \$1.1 million in GLRI funding for the Shiawassee project. The research team will test *Typha* harvesting and biochar treatments separately and in various combinations in large plots to learn which methods or combination of methods work best. Shiawassee is a former agricultural site, so the team will also seed native plants to help restore biodiversity. They will study the results over multiple years and take what they learn to land management agencies throughout the Great Lakes region. The large size of the project will help demonstrate that their management techniques can work in the long term and at scale.

Ohsowski and Lishawa stress that education is also central to their work. Student research assistants support fieldwork and help in the lab on campus. However, the primary reason for involving students is to provide a rich learning experience. Students working with Team *Typha* develop valuable research skills and gain hands-on experience, and the faculty members encourage them to pursue their own projects. The work prepares them for careers as independent researchers.

Team *Typha* has a big job ahead with their Shiawassee research project, but everyone involved is looking forward to the challenge. They anticipate generating new knowledge to inform regional restoration practices, and Ohsowski and Lishawa look forward to helping to launch the careers of future generations of researchers and environmental leaders.



In 2023, Ohsowski and Lishawa brought a team of 10 to the research station in Michigan, including undergraduate and graduate students and research associates.



Connecting sustainability, business, and economics

The School of Environmental Sustainability (SES) applies a whole-systems approach to complex environmental challenges, focusing on multidimensional solutions that account for interconnected scientific, social, political, and economic factors.

Our interdisciplinary, experiential curriculum integrates environmental and social sciences, preparing students to develop equitable, effective, and practical solutions that benefit people and the planet.

In recent years, SES has built on its interdisciplinary approach by expanding programs focused on the connections between sustainability, business, and economics. Undergraduates can minor in environmental economics and sustainability, and students in the SES master's degree program can select a concentration in sustainable business. SES also supports the sustainability management minor in the Quinlan School of Business.

This year, SES is expanding its academic offerings related to business and economics by adding a new bachelor's degree program in environmental economics and sustainability.

The course of study connects environmental and social problems to business theories and economic analysis. Students in the major start with foundational classes about sustainability and economics and then concentrate on business-oriented courses or economics,

policy, and law.

Richard (Max) Melstrom, PhD, associate professor of ecological economics, spearheaded the development of the new degree program.

"In the last five to ten years, SES has been moving to make social science, economics, and business more integral in the sustainability curriculum," he said. "A main outcome of the major is connecting environmental and sustainability-related thinking across topics and fields related to business, policy, and economics."

Melstrom noted that environmental actions have economic consequences, from policy implementation to restoration efforts and sustainable business strategy. He said that the field of economics has much to contribute to our understanding of environmental problems.

"The economics discipline has been a leader in the study of distributional and development problems, including poverty, unemployment, pollution, public health, and economic mobility," said Melstrom.

Students in the new major will learn how to evaluate social and environmental problems through a mix of theory and qualitative analysis. They will learn to analyze who benefits or is harmed by economic and environmental policies and identify how benefits and harms are distributed in a population. Students will take courses with faculty members in SES and the Quinlan School of Business. The curriculum will explore topics such as tradeoffs, property rights, equity, ecosystem services, and the costs associated with environmental degradation.

This interdisciplinary major will prepare students for careers in government, consulting, and environmental nonprofits.

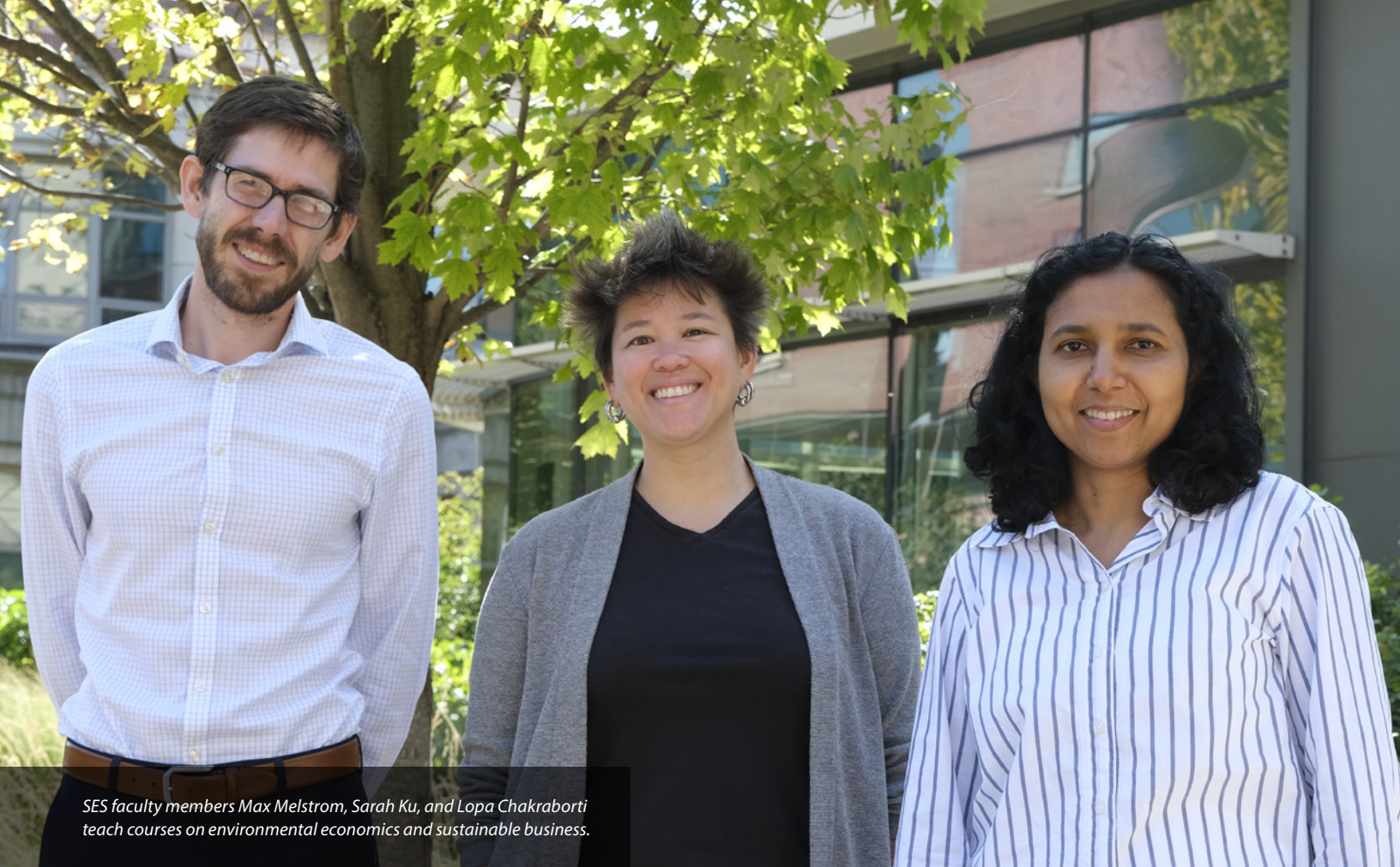
Graduates will also have the background to pursue graduate degrees in law, applied economics, environmental management, public policy, or sustainable business.

In recent years, SES has hired new faculty members with the expertise to support the growing curriculum related to environmental economics and sustainable business. Melstrom came to SES in 2017. Environmental economist Lopa Chakraborti, PhD, joined the faculty in 2021, and sustainable business specialist Sarah Ku, PhD, came on board in 2022. Both Chakraborti and Ku hold joint appointments in SES and the Quinlan School of Business.

Chakraborti earned her PhD from the Department of Agricultural and Resource Economics at the University of Maryland, College Park. She holds a master's degree in quantitative economics from the Indian Statistical Institute. Before joining Loyola, Chakraborti was an associate professor in the Department of Economics at the Center for Research and Teaching in Economics in Mexico. She has also been a World Bank consultant on sustainable development topics such as green accounting.

At Loyola, Chakraborti teaches an ecological economics course exploring the interconnections between human and natural environments, emphasizing sustainable economic development. Students learn about the roles of private sector incentives and regulations in addressing global, regional, and local ecological and sustainability issues—critical topics for students in the new environmental economics and sustainability major.

Chakraborti's research focuses on environmental justice and social equity,



SES faculty members Max Melstrom, Sarah Ku, and Lopa Chakraborti teach courses on environmental economics and sustainable business.

“The economics discipline has been a leader in the study of distributional and development problems, including poverty, unemployment, pollution, public health, and economic mobility.” — MAX MELSTROM

and she investigates questions about the environment and development. She notes that researchers around the globe are increasingly interested in strategies for controlling environmental pollution while addressing socio-economic inequities, including inequities in exposure to pollution. She says the new degree program will offer students a sound economics and business foundation and opportunities to explore topics ranging from natural sciences to business analytics to social justice.

Sarah Ku came to Loyola from Georgia State University, where she earned a PhD in business administration / marketing / international business. In her first year at SES, she redeveloped three existing courses: Sustainable Business Management, Introduction to Circular Economy, and

Design for Circular and Sustainable Business. These courses are open to undergraduate and graduate students in SES, Quinlan, and other Loyola programs.

Ku aims to bridge the gap between the sustainability and business fields. She says sustainability professionals need to understand how businesses can contribute to solving environmental problems and that, likewise, it is vital that business leaders realize how their work connects with ecological issues.

“A lot of business-specific language, practices, and courses tend to not consider sustainability, either in the environmental or social dimension. It’s focused mainly on economic profit,” Ku said. With the redesigned courses, students learn how businesses can function sustainably, an area of growing interest

among consumers.

“We’ve seen a big shift in what people expect of businesses as consumers and employees and broadly as a community,” Ku explained.

Students in Ku’s courses learn how business leaders, employees, and consumers can help build a more sustainable economy—a critical piece of the puzzle of solving global environmental problems.

With the expansion of interdisciplinary programs in SES, the school aims to train future leaders who will bring the worlds of economics, business, and sustainability together, helping to create a more equitable and sustainable economy that meets people’s needs and preserves a healthy, green planet for future generations.



Photo provided by Double Black Diamond

Creating a sustainable campus

Sustainability is a University-wide priority at Loyola. The University's strategic plan identifies Care for Our World as a core enduring value, and our students, faculty, and staff collaborate across departments to put this value into action in our educational programs, campus operations, and daily activities. The Office of Sustainability coordinates campus-wide initiatives and tracks Loyola's progress as we strive to reduce our environmental footprint. Here are some of the University's recent activities and accomplishments.

100%

of Loyola's electricity needs will be provided through a new solar power project

Committed to clean power in Illinois

In April 2023, Loyola announced that the University had signed an agreement with Constellation to purchase power from a new solar project under development in Sangamon and Morgan Counties in Illinois. Developed by renewable energy developer, owner, and operator Swift Current Energy, the "Double Black Diamond" project will be the largest solar farm in Illinois and among the largest solar projects in the country. It will provide enough electricity to completely power the University's Lake Shore, Water Tower, and Health Sciences Campuses. Loyola selected Double Black Diamond to spur economic development in Illinois and support new renewable energy production linked with campus demand. Compared to current electricity and renewable energy credit purchasing, Loyola anticipates significant savings during the 12-year agreement.

Loyola receives STARS Gold rating for sustainability

This year, the Association for the Advancement of Sustainability in Higher Education (AASHE) renewed Loyola's STARS Gold rating in recognition of the University's sustainability achievements. STARS, the Sustainability Tracking, Assessment & Rating System, measures sustainability in all aspects of higher education. To receive a rating, participating universities submit a sustainability report documenting their achievements. Loyola has participated in STARS since 2014 and submitted its fourth report this year. With each submission, the university has maintained a Gold rating and has consistently increased the number of sustainability credits earned. Loyola has established a goal of achieving STARS Platinum, the highest possible rating, and has demonstrated continual progress toward this goal.



Loyola receives Laudato Si' Champions Award

Catholic Climate Covenant presented the organization's first U.S. Laudato Si' Champions Awards at the June 2023 Laudato Si' and the U.S. Catholic Church Conference. Loyola received the award in the university category. Catholic Climate Covenant is a national nonprofit dedicated to inspiring and equipping U.S. Catholics to care for our common home and take greater climate action. The group presented awards in 10 categories, recognizing Catholic individuals, families, schools, businesses, dioceses, and other institutions across the United States who have made outstanding achievements in environmental sustainability and stewardship. Winners received a hand-painted Saint Francis statue (pictured to the right) and gifts of fruit trees planted in their honor through Catholic Relief Services.



Students support Loyola's energy efficiency efforts

In support of the 2015 Climate Action Plan, Loyola is undertaking deep energy audits of all campuses and facilities to optimize systems and plan for energy-related improvements. In the spring of 2022, the Office of Sustainability hired four Loyola students to conduct room-level energy audits on the Water Tower and Health Sciences Campuses. The team visited 1,732 spaces and inventoried equipment, lighting, plumbing, and environmental conditions. The group shared a summary of the findings with a consulting engineering team and provided conservation recommendations. Recommendations include simple switches like upgrading to more energy-efficient LED exit signs and optimizing the use of shared spaces and empty offices.



Making campus life more sustainable and affordable

At the end of each year, Loyola's Think Green and Give program helps students donate items they no longer need when they move out of their residence halls. Over 9,000 pounds of clothing, food, and household items were collected at the end of the 2022-2023 school year and sorted for donation to local charities. This year, a new Reuse Market program set aside dorm room staples such as bath caddies, storage drawers, lamps, and similar student items for distribution to incoming students. Targeted student groups (international and low-income) were invited to the Reuse Market, hosted by Residence Life, to pick out items they would otherwise buy at the local big-box store. The Reuse Market makes Loyola more affordable and creates a circular economic system that extends the life of items needed in the average Rambler's dorm room.



Sustainability by the Numbers

Campus operations

44% of waste generated on campus is diverted from landfills through recycling or composting.

Since establishing a baseline in 2008, the University has significantly reduced emissions, energy use, and water consumption:*

- **79% reduction in greenhouse gas emissions** on our Lake Shore Campus
- **38% reduction in energy use** per square foot
- **34% reduction in water** use per square foot

*Based on utility data for FY22 and the FY22 Greenhouse Gas Emissions Inventory.

Academics

Over 20% of courses offered at Loyola address at least one sustainability learning objective.

52 of 80 academic departments offer at least one sustainability course.

Loyola offers multiple sustainability-focused programs, including **7 bachelor's degree programs, 8 minors, and 9 master's degree programs.**

Over 140 faculty members conduct sustainability research at Loyola. They represent **52 of the 59 academic departments** with active research.

Engagement

250 students and 190 employees have trained as sustainability educators and routinely work to educate and engage their peers.

Loyola is home to **over a dozen student organizations** related to sustainability.

Loyola students contributed **377,880 hours of community service** last year.

Over the past academic year, the Office of Sustainability organized **over a dozen events** on all three campuses, engaging thousands of students, staff, faculty, alums, and community members.

Seeking solutions and celebrating success

Throughout the year, various events and programs bring the Loyola community together to discuss critical sustainability challenges, explore solutions, and celebrate our successes. Here are some highlights from the 2022 to 2023 academic year.

Climate Change Conference

The annual Loyola Climate Change Conference gathers leading experts to discuss practical, equitable solutions to the climate crisis. The 2023 event examined how climate change impacts global human migration. Nearly 300 people gathered on campus; an additional 400 tuned in virtually. Filmmaker Michael Nash delivered the keynote presentation, sharing what he learned while making his film *Climate Refugees*. Participants also heard from Shelly Culbertson, associate director of the Disaster Management and Resilience Program at the RAND Corporation, Father Tom Smolich, SJ, international director of the Jesuit Refugee Service, and Yves Umuhoza, CEO at AEI and climate and refugee education advocate. Chicago Public Media's Steve Bynum served as moderator, guiding the audience through insightful discussions on how to tackle mass climate migration.



The Climate Change Conference featured presentations by (from left to right) Steve Bynum, Father Tom Smolich, SJ, Shelly Culbertson, and Michael Nash.



Typha Tex took first place in the Abrams Sustainable Business Challenge.



Participants enjoyed (b)Earth Day cake during Loyola's annual celebration of sustainability.

Abrams Sustainable Business Challenge

The Abrams Sustainable Business Challenge invites Loyola students to envision, plan, and launch environmentally friendly businesses and products. Students from programs across the University form teams and work with faculty mentors to develop ideas for eco-friendly ventures. After an initial round of judging, the top six teams present their concepts to a panel of experts for the chance to win up to \$20,000 in prize money. This year, four SES students took first place with their pitch for TyphaTex. They proposed using invasive cattails as a sustainable material for producing textiles.

Earth Week

In April, Loyola held various Earth Week events celebrating the university's sustainability achievements and inviting community members to renew their commitment to caring for our world. Activities included a rain garden workday, a waste challenge, and a climate film series. The main event was the (b)Earth Day party, organized by the Office of Sustainability. Students, faculty, and staff gathered for ice cream, cake, and live music. Members of student environmental groups were on hand to share information about their activities and how interested students can get involved. Additionally, the EcoVoice Project organized a song gathering in collaboration with choir students from Loyola and the University of Illinois at Chicago.

SES donor honor roll

Total giving for the 2022–2023 fiscal year:

\$100,000 – \$999,999

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Land Acknowledgement Statement

The Loyola University Chicago community acknowledges its location on the ancestral homelands of the Council of the Three Fires (the Ojibwa, Ottawa, and Potawatomi tribes) and a place of trade with other tribes, including the Ho-Chunk, Miami, Menominee, Sauk, and Meskwaki. We recognize that descendants of these and other North American tribes continue to live and work on this land with us.

We recognize the tragic legacy of colonization, genocide, and oppression that still impacts Native American lives today. As a Jesuit, Catholic university, we affirm our commitment to issues of social responsibility and justice. We further recognize our responsibility to understand, teach, and respect the past and present realities of local Native Americans and their continued connection to this land.



SCHOOL OF ENVIRONMENTAL SUSTAINABILITY

BVM Hall, Rm 301 • 1032 W. Sheridan Road • Chicago, IL 60660

P 773.508.2130 • **E** SES@LUC.edu • **W** LUC.edu/sustainability

