



THE HAYWARD CAMILLE DAVEY
SCHOOL OF NATURAL SCIENCES

FOUNDER JONES SCIENCE CENTER

THE GIFT

Southwestern celebrates the new Garey School of Natural Sciences and the completion of the Fondren–Jones Science Center.

OF A LIFETIME

BY DEBBIE RITENOUR

MORE THAN HALF OF THE STUDENTS entering Southwestern each fall plan on majoring or minoring in the natural sciences. The popularity of these degree programs is no surprise considering the University's tradition of excellence in science education. The cutting-edge curriculum incorporates inquiry-based learning into classes at all levels, empowering students to learn through their own agency and investigation and enabling the committed, engaged faculty to make the academic experience truly meaningful for students.

Now, thanks to the largest single private gift in Southwestern's history and other generous donations, students and faculty in the natural sciences have access to a world-class facility, state-of-the-art tools, and learning and research opportunities that will enable them to succeed both within and outside the University.

The new Jack and Camille Garey School of Natural Sciences opened last fall inside the recently renovated and expanded Fondren–Jones Science Center. Together, the new school and modernized building are amplifying the University's commitment to the natural sciences and transforming the student experience.

An unprecedented gift

In 2018, Southwestern Life Trustee Jack Garey gave \$15 million to the University in support of faculty development, academic programming, need-based scholarships, and high-impact experiences. Garey, who made the gift in honor of his late wife, Camille, is a committed environmentalist, making the natural sciences the perfect fit for the majority of his gift.

"This unprecedented and transformative gift, which has been fully allocated to the University's endowment, will build upon our reputation as a world-class institution that is transforming higher

education and as a national leader in high-impact learning and intellectual growth," President Edward Burger said when the gift was announced.

While administrators had long known Garey was a staunch supporter of the University—he had served on Southwestern's Board of Trustees for 12 years before being appointed as a life trustee in 2017—the timing of the gift was unexpected.

"We knew we'd been a part of his estate planning, but the fact that he accelerated his gift was a surprise," says Vice President for Finance and Administration Craig Erwin. "His generosity reflected his belief in what we're doing here at Southwestern and created some buzz and excitement about the University in general."

"It was important to me to make this gift now because we are at a crucial time in education in this country, a crossroads of sorts," Garey said in May 2018. "I believe that Southwestern University... is going to play a major role in the evolution of higher education—not just in Texas but in the nation as well. I wanted to invest in that transformation."

In addition to establishing the Jack and Camille Garey School of Natural Sciences, the endowment funded by the gift will underwrite high-impact experiences for 32 Garey Scholars in their sophomore and junior years, support eight annual midcycle competitive sabbatical semesters for tenured faculty across the University, provide additional need-based assistance through the Financial Aid Office, and create five endowed chairs in the natural sciences.

"The impact of \$15 million cannot be overstated," says Vice President for University Relations Paul Secord. "It is not only a powerful endorsement of our vision and direction as a University, but the earnings from that endowment will generate \$750,000 a year in perpetuity that will go to the direct benefit of our students both today and for countless generations to come."

A new school

The new Garey School of Natural Sciences joined the Brown College of Arts and Sciences and the Sarofim School of Fine Arts as one of three named schools within the University. It officially united five academic departments: Biology, Chemistry and Biochemistry, Kinesiology, Mathematics and Computer Science, and Physics.

"The synergy of having all of the natural science faculty under one roof allows for more natural and frequent interactions between our faculty and students," Secord says.

These interactions help students think beyond their coursework and make intentional connections within the natural sciences and between the natural sciences and other subjects. This is a key component of Paideia, Southwestern's interdisciplinary approach to education, which empowers students to think in broader, more original ways. But this ability to make connections also prepares students for careers in the natural sciences. The science of the 21st century is both multidisciplinary and interdisciplinary, with professionals in different disciplines collaborating to develop solutions to the world's biggest problems.

"Paideia is all about making connections, and modern science is all about making connections," says Professor of Biology and Lillian Nelson Pratt Chair Ben Pierce. "It's critical that our students are able to make those connections and work in a multidisciplinary environment."

The new school also fosters interdisciplinary connections between the natural sciences and the humanities, fine arts, and social sciences. These connections can help students discover new passions outside the natural sciences. For example, many students complete the premedical pathway in addition to majoring in nonscience fields such as art history, communication studies, or philosophy. Some will major in chemistry or kinesiology but minor in English or theater. Others will major in two or more fields, such as Assistant Professor of Computer Science Jacob Schrum '06, who majored in computer science, mathematics, and German.

"At Southwestern, students are encouraged to make important, meaningful connections between seemingly unrelated topics," Schrum says. "These connections can make you think about things in a new way and appreciate them a bit more."

A world-class facility

The Garey School is housed in the Fondren–Jones Science Center, which, thanks to a number of generous friends of the University, underwent a multimillion-dollar expansion and renovation over the past several years. The original building was constructed in

1952, and an addition was built in 1998. The most recent expansion consisted of two phases: phase 1, which broke ground in April 2014 and was completed in September 2016, added 25,000 square feet of space for teaching laboratories, student–faculty research space, and collaborative learning studios, while phase 2, which began in December 2017 and was completed as classes began in fall 2019, added seven new classrooms, five teaching laboratories, one conference room, two computer laboratories, seven research laboratories, and 42 new offices.

"The Fondren–Jones Science Center as a whole feels like an integrated building now," Erwin says. "Before, it felt like three very distinct buildings with disjointed hallways and unexpected elevation changes. Now, it's a seamless, well-thought-out space."

Planning for the recent expansion began 10 years ago. "One of the first things we did was hold a workshop with faculty, administrators, students, and the architects to talk about what science will look like in the future. We wanted to ensure the facility reflected the science of the 21st century," says Pierce, who helped coordinate faculty input for the project. "We were already revising the curriculum and committing to inquiry-based learning, but we didn't have the facilities to support that."

Faculty from the natural sciences were involved throughout the decade-long project. "We were included from the very beginning and every step of the way," Pierce says. "We were even included during the construction process, so we could provide our input as things came up and decisions had to be made quickly."

The project team also created a number of task forces to focus on specific aspects of the facility, such as the laboratories, classrooms, and student interaction spaces. These task forces included faculty, staff, and students from across the University. "We wanted to ensure we created spaces that would work for the whole campus community," Pierce says.

Professor of Chemistry Emily Niemeyer chaired the classroom task force. "We held discussions on what the classrooms should look like," she says. "I felt strongly that we shouldn't have desks, and we talked about how that would work."

Instead of rows of desks facing forward like in a traditional classroom, the new classrooms have circular tables and modular furniture that can be easily rearranged. They also feature integrated audiovisual equipment and touch screens that allow for increased participation and easy sharing of data. "We don't have to do work-arounds anymore. The classrooms are designed to facilitate active learning," Niemeyer says.

FONDREN–JONES PHASE 2

7 NEW CLASSROOMS

5 TEACHING LABS

1 CONFERENCE ROOM

2 COMPUTER LABS

7 RESEARCH LABS

42 NEW OFFICES



Southwestern students can now study, collaborate, and socialize in the bright and airy Cullen Foundation Atrium in the Fondren–Jones Science Center.

The overall effect is a classroom that embraces group learning and inquiry. Even the chairs are thoughtfully designed, with space for students' backpacks.

"The minute you walk in the classroom, you know something is different. You can feel that something is going to happen here," Niemeyer says. "We now have a physical space that supports the kind of pedagogy we've been practicing."

Indeed, the Fondren–Jones Science Center represents the University's commitment in stone to Paideia. It was intentionally designed to foster increased collaboration among faculty and students and to provide more opportunities for inquiry-based, multidisciplinary learning and meaningful educational experiences.

"I often refer to this project as the house that pedagogy built," President Burger said at the Final Beam Ceremony on August 30, 2018, "because that really, in fact, is the case."

A commitment to research

By supporting high-impact experiences for Garey Scholars, the Garey gift provides these students with valuable opportunities they may otherwise not have had. These experiences, which include study abroad, internships, community-engaged learning, and faculty-mentored research, allow students to apply their learning in real-world situations and develop skills that will prepare them for success in today's workforce.

Collaborative research is particularly important for students in the natural sciences. "The literature shows that research helps students identify as scientists and become more engaged and successful in their area," Niemeyer says. "It also shows that students who participate in research are more likely to persist in the sciences."

The Fondren–Jones Science Center gives students access to state-of-the-art research tools and facilities, including a cell-culture laboratory, an imaging center, instrumentation rooms, and a nuclear

magnetic resonance spectroscope. The shared research laboratories allow for more interaction between faculty and students and provide a better research experience for students.

"There's space to conduct experiments in the center of the lab and planning and interactive space around the outside of the room," Niemeyer says. "This is completely different from the rows of benches in a traditional-looking lab. Students can wheel around to one another and work in groups. It all works perfectly. It's really amazing."

Many of the laboratories and classrooms feature a lot of windows, allowing passersby to peek inside and see what students are doing. This reinforces the collaborative nature of the building.

"I'm forced to use the computer lab most of the time," says Schrum, who is currently teaching Computer Science II and Programming Languages, "but now I'm surrounded by windows. I joke that the beautiful view could detract from people's ability to pay attention."

It's not just students who benefit from Southwestern's commitment to research. The midcycle sabbaticals supported by the Garey gift will provide more time for faculty members to advance their research and scholarship and further their long-term professional growth.

"Typically, faculty can apply for a sabbatical every seven years and use this time to pursue activities beyond the classroom such as research and writing," says Erwin. "These midcycle sabbaticals further support the teacher–scholar model that Southwestern is so invested in."

In addition to pursuing their own individual research, faculty often spend their sabbaticals helping students get their research published. Publishing a research article, especially when listed as the first author, is a big achievement for students that can help them stand out from their peers.



"I was on sabbatical last spring, and I focused on finishing projects students were 95% done with," Niemeyer says. "Students have to write a scientific manuscript as part of their capstone, and there are a lot of details involved in getting that published. Without sabbaticals, we wouldn't have time to help."

The Garey gift also supports faculty by establishing five endowed chairs. "Endowed chairs are the highest recognition an excellent teacher-scholar receives, and the creation of five new Garey Chairs will enable Southwestern to honor and celebrate its exceptional professors with them," Secord says.

The Fondren-Jones Science Center houses Southwestern's Summer Collaborative Opportunities and Experiences (SCOPE) program, in which students spend eight weeks conducting full-time research alongside faculty mentors. The program aims to foster a culture of research, support ongoing faculty development, and promote student investigative learning, persistence, and success.

"I regularly do summer research with SCOPE students," Schrum says. "Working in the new space will make the research experience more enjoyable next summer. We can collaborate better and build more of a research community."

A stronger community

Building a sense of community and creating more opportunities for interaction was an important goal when designing the expansion and renovation of the Fondren-Jones Science Center. The Kinesiology Department, for example, has been part of the natural sciences for 10 years, but it was located across campus, in the Corbin J. Robertson Center. Professor of Kinesiology Scott McLean says moving to the Fondren-Jones Science Center has been a remarkable and refreshing change.

"Having us on the other side of campus was always a challenge. Now I see other members of the natural sciences faculty every day, and we stop and talk," McLean says. "I've never had that before, and I'm starting my 19th year here."

These regular interactions can lead to increased collaborations among faculty. "As a biomechanist, I benefit from being near faculty in the physics and math departments," McLean says. "I can draw from their expertise in my own work."

Professor of Mathematics and Lord Chair in Mathematics and Computer Science Fumiko Futamura notes that bringing the natural sciences together can also help faculty improve their teaching. Because students from all five departments will be in the same space, faculty members can learn how students in other disciplines are using the material they teach.

"Science majors are required to take Introduction to Statistics and Calculus I," Futamura says. "It will be helpful to hear how they

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—PROFESSOR FUMIKO FUTAMURA

are using what they're learning. That will help us teach the classes better and better serve students."

The Fondren-Jones Science Center is also facilitating greater interaction between students and faculty. The Chapman-Whitmore Common Room, for example, which features a lounge, lots of whiteboards, and a large study space, sits in the middle of the Mathematics and Computer Science Department, surrounded by the professors' offices. "Students can pop right in and ask questions," Futamura says. "So much about succeeding in any major is having a sense of community and support, and this space allows us to create that."

The building was designed to be inviting not just for students and faculty in the natural sciences but for students in all disciplines. With a two-story atrium, taller ceilings, wider corridors,



an abundance of natural light, and two outdoor teaching spaces, it is destined to become a gathering place for the entire campus community.

"Everyone is going to want to use this building. Students will quickly see the value, regardless of whether they're an English major or a physics major," Pierce says. "It's much better than I ever envisioned. It exceeded my expectations."

To better integrate the building with the rest of the campus, the University built the Floyd and Annetta Jones Plaza between the Fondren-Jones Science Center and Mood-Bridwell Hall. The plaza offers outdoor classroom opportunities, as well as places to sit, think, and recharge. It also features a main gate that welcomes visitors to the campus.

"This is a facility that really invites all students to learn about science," McLean says. 🏛️



A PASSION FOR NATURE

THE \$15 MILLION GIFT TO Southwestern is not the first time philanthropist and retired businessman Jack Garey has supported the Central Texas region. Georgetown has experienced explosive growth in recent decades—it's the

seventh fastest-growing city in the country, according to the U.S. Census Bureau—and Garey and his late wife, Camille, recognized that the community needed more parks and open areas for residents to enjoy.

In 2004, the Gareys announced that they would bequeath their 525-acre ranch on the South Fork of the San Gabriel River and \$5 million to the city of Georgetown for the development of a city park. They later accelerated the gift, and Garey Park opened in 2018. It is about 1.5 times the size of Austin's Zilker Park and includes a playground, a splash pad, a dog park, an equestrian arena, fishing ponds, the Garey House event space, pavilions, picnic shelters, and more than seven miles of hiking and equestrian trails. In accordance with Garey's vision, the park features native plants and wildlife and preserves the natural beauty and character of the region. 🏛️