Strategic Plan for Research

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TEXAS STATE UNIVERSITY

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Executive Summary

Texas State University's five-year strategic plan for research is an outgrowth of *Hopes & Aspirations High,* an ambitious vision with a set of mutually supportive strategies: elevate student success, "Run to R1," increase enrollment, grow the Round Rock Campus, and become an employer of choice. The visioning effort commenced under the leadership of President Kelly Damphousse, whose tenure at Texas State began in July 2022, and was a deeply consultative, campus-wide effort to develop a comprehensive plan for the University's near-term future. This visioning effort, in turn, led to the development of the *2023-2029 University Plan.* It has five major goals, all of which are related to research:

- Supporting Student Success
- Advancing Academic Excellence
- Expanding Discovery, Innovation, Creativity, and Research
- Enriching Community, Collaboration, and Partnerships
- Developing Infrastructure and Resources

Texas State's efforts to make research central to the University's identity signal institutional priorities around the generation of new knowledge and research that benefits students and society at large. Table 1, below, offers an overview of key indicators of research activity.

Indicators of Research Activity	**Result**
New research doctoral programs approved	8
Increase in research expenditure over last decade	102%
Research expenditures in FY 24	$165M
Active sponsored awards	275

Table 1. Summary of Indicators of Research Activity

I. Plan to Elevate Research Enterprise

The "Run to R1" is shorthand for Texas State's commitment to a comprehensive, resource-intensive effort to achieve the "Doctoral Universities: Very High Research Activity" (R1) designation from the Carnegie Classification for Institutions of Higher Learning. The University's plan for achieving that designation and elevating the entire research enterprise involves a four-pronged strategy: (1) improve and grow the infrastructure and resources needed to support research; (2) attract, invest in, and retain exceptional teacher-scholars; (3) increase sponsored research funding from all sources; and (4) expand doctoral programs. These strategies are addressed in detail under the headings found below.

The development and launch of the *2023-2029 University Plan* led not only to the realignment of academic and administrative units across the University, but also to the reallocation of resources. These changes had major implications for research. The Office of Research and Sponsored Programs, formerly one of several units within the Office of the Provost, was elevated to the Division of Research, which included the creation of a new cabinet position for the vice president for research. The creation of the Division of Research came with additional investments in leadership positions, as well as pre-award and post-award support staff, who are charged with directly supporting the University's rapidly growing research enterprise.

Goals and Priorities

Texas State is a comprehensive university with wide-ranging research activity that involves hundreds of faculty members, postdoctoral researchers, and mentored student researchers across five colleges. These members of the Texas State research community collaborate and partner with researchers across the U.S. and around the world on sponsored projects and high-impact

publications. Texas State celebrates and invests in this broad engagement in research because doing so ensures the University's research impact across many different domains of knowledge and society—here in Central Texas and around the world. However, in order to achieve its goal of growing sponsored research, Texas State necessarily has identified focused research priorities that emerge from its mission and strengths, advance institutional and external needs, respond to workforce demands, and stimulate interdisciplinary collaboration and innovation. These research priorities are semiconductors; water; AI and data science; applied humanities; applied anthropology; teacher education; transportation; energy; health sciences; and translational health. Texas State will advance these research priorities through new faculty lines and support staff positions, new and renovated research facilities, and other kinds of institutional funding. Texas State will also advance these priorities by developing capacity to seek external funding that can stimulate new activity in these areas.

Increasingly, centers and institutes at Texas State have outsized influence on research activity and total sponsored research funding, in part because they are able to attract large-scale, multiyear awards that involve teams of researchers. As of 2025, Texas State has 36 centers and institutes—nine at the university level, 14 at the college level, and 13 at the department level. Texas State is also a participant in a Texas State University System center that focuses on invasive species.

Key University centers and institutes with active multimillion-dollar sponsored awards include the Texas School Safety Center; the Advanced Law Enforcement Rapid Response Training (ALERRT) Center; the Meadows Center for Water and the Environment; the Institute for Molecular Life Sciences; and the Freeman Research Center. The Freeman Center, for example finalized its first major sponsored agreement in late 2024: a $2.5 million research

project with a space technology company. Freeman is exploring additional opportunities for defense-related research, experimentation, and education, with research collaboration meetings between industry and faculty scheduled for late Spring and early summer 2025. In February of 2025, the Center for Archaeological Studies was awarded a $28.3 million grant from the Department of Defense for research on environmental compliance.

In recognition of their complexity and significance, university-level centers operate under the auspices of the Division of Research. This organizational structure accomplishes several strategic aims. First, even though center-affiliated faculty and postdoctoral researchers are affiliated with academic departments, centers themselves can operate outside of departmental priorities and finances. This tends to give centers more operational flexibility and responsiveness to emerging research needs and funding opportunities. Second, the independence of centers allows for greater interdisciplinary research that is connected to, but independent from, departmental expectations. Third, the Division of Research is able to offer targeted, just-in-time logistical support that does not interfere with departmental autonomy.

Collaborations and Partnerships

Texas State is deeply committed to freedom of academic inquiry and disciplinary integrity. The University does not dictate the research topics of its faculty, which often fall within the boundaries of well-established academic disciplines (e.g., biochemistry, engineering, or social work), and Texas State recruits faculty for appointments within discrete academic departments. However, the University retains a strong interest in encouraging, facilitating, and supporting faculty in working across disciplinary boundaries.

Efforts to stimulate this type of cooperation and collaboration fall under several different initiatives. First, Texas State is growing its investments in its Shared Research Operations (core facilities), and it plans to create an endowed fund for the acquisition and maintenance of instrumentation. Although faculty almost always prefer to use instrumentation within their own labs or departments—and this is often appropriate—the use of co-located research operations can promote new collaboration and cooperation among researchers with shared interests. Second, the Division of Research has begun to spearhead semester-long research initiatives that bring together faculty from different colleges and departments into small teams. Teams include a mix of junior and senior scholars, and those with a range of experience with sponsored research. Teams are offered a modest research incentive and logistical support as they develop a white paper or grant proposal around a new topic. Recent research themes include energy innovation, semiconductors, AI, water, and digital humanities. A new research theme for summer 2025 is aging and dementia. Faculty feedback on these activities has been very positive, and Texas State plans to continue teambuilding efforts around emerging and important research topics that bridge multiple disciplines. To support these activities, the Division of Research has utilized both institutional and sponsored funding. Third, as noted elsewhere, the situating of university-level, interdisciplinary centers under the umbrella of the Division of Research allows the Division to support cooperative and collaborative research, and to engage different academic units as appropriate.

Texas State faculty have historically engaged in limited sponsored research activity with other Texas universities. Current partners include Texas A&M Extension Service, Texas A&M University-Corpus Christi, Southern Methodist University, Texas Tech University, Austin Community College, and the University of Texas at Austin. In an effort to stimulate

collaborations with other Texas universities, the Office of Research Development—a new office within the Division of Research (details below)—is spearheading new research development activities with UT San Antonio, UT El Paso, the University of New Mexico, St. Mary's University, Lamar State College Port Arthur, the Alamo Colleges, and the University of Houston-Clear Lake. Texas State also has new and emerging research partnerships beyond higher education. These partners include the Lower Colorado River Authority, the City of Austin, the Texas Department of Transportation, the Texas Comptroller of Public Accounts, and multiple city- and county-level entities.

Economic Impact

Texas State is in the midst of a comprehensive economic impact study that will be completed by early summer 2025. This study will strengthen the University's ability to understand the economic impact of research, and economic impact of the University as a whole. The soon-to-be-completed study will follow the model of another economic study completed in September of 2021. That study found that the University's impact for FY2021 resulted in more than $2 billion in total economic activity and the creation of nearly 16,000 jobs. Regionally, this translates to an economic impact of $1.8 billion and 14,500 jobs. Finally, in Hays County, home to Texas State's San Marcos campus, the University generated a total economic impact of $1.1 billion annually and 9,500 full-time jobs. Thus, Texas State has a significant regional and local (county-level) impact, with more than half of its economic impact, and nearly 2/3 of jobs, in a single county (Hays County).

The study's findings were derived from the IMPLAN Input-Output model. Its fundamental concept is that spending by one entity, such as Texas State, is income for another entity, like an

employee. Employees spend their pay on goods and services, which results in income for local merchants. The merchants, in turn, use their funds to hire workers, who spend their wages on goods and services.[1] Texas State's primary economic impact comes as a result of employees and wages, but the University's economic impact is also understood through university operations, construction projects, student spending, and visitor spending. The total economic impact is achieved through this direct spending, in addition to indirect spending and induced effects. As part of the comprehensive economic impact study underway, we seek to understand the economic impact of research, which expends more than $150 million on wages, goods, and services. See Figure 1, below, for a distribution of research-related spending by state senate and house districts.

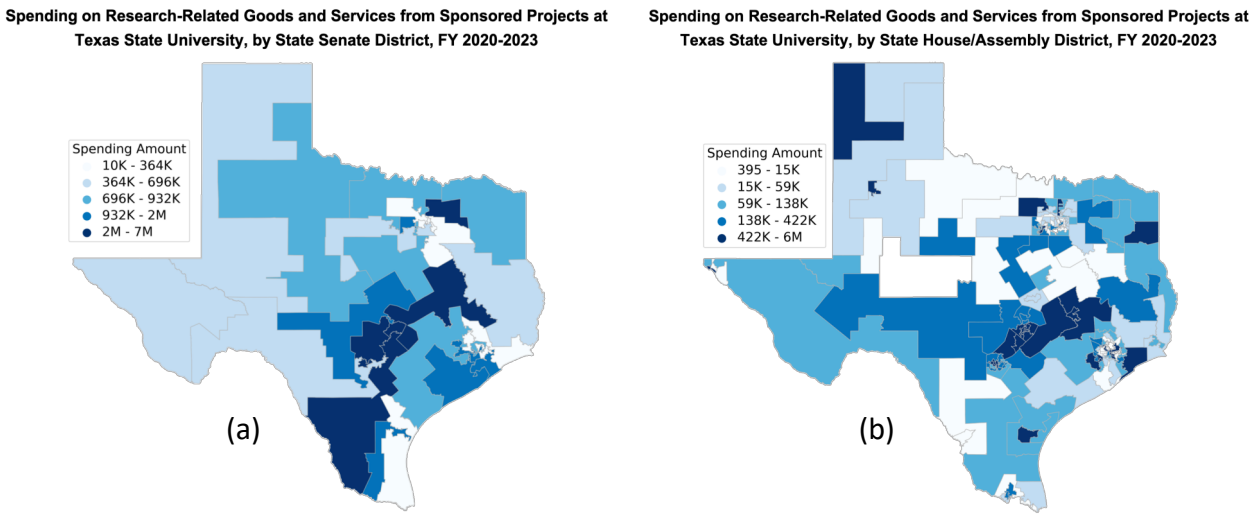

Figure 1. The economic impact of Texas State University's' FY 2020-2023 spending on research-related goods and services by **(a)** State Senate; and **(b)** State House/Assembly districts.[2]

[1] William T. Chittenden, "The Economic Impact of Texas State University," Texas State University, San Marcos, Texas, September 2021.
[2] State Legislative Fact Sheet, Institute for Research on Innovation and Science (IRIS), April 2024.

II. Plan to Increase Research Funding and Productivity

Efforts to increase private and federal research expenditures are made possible by close cooperation among the Division of Academic Affairs (including the Graduate College), the Division of Research, University Advancement, and Round Rock Campus. Working together, faculty and staff from these divisions are aligning their efforts to grow research and prioritize investments. By carefully leveraging state investments alongside corporate and foundation support, enhancing federal research competitiveness, and expanding commercialization initiatives, Texas State is fostering a dynamic research ecosystem that can attract significant research funding and lead to greater research productivity.

From outside of the University itself, the creation of the voter-approved Texas University Fund (TUF) promises to vastly expand research activities across all disciplines, especially those that are poised to attract federal, industry, and private sponsored funding. Funding from TUF, which is used in its entirely for research, will support course releases for research-active faculty, enhance doctoral programs, establish core research support infrastructure, and improve faculty compensation to help bring Texas State into line with norms for research universities.

External Funding

Texas State has prioritized growth in private and federal research expenditures as a centerpiece of its Run to R1 initiative. In alignment with Run to R1, Texas State is executing a bold new strategy to increase research funding. Research expenditures have grown significantly in recent years, reaching $72.1 million in total research expenditures in FY2024, which exceeds

the threshold for R1 metrics. The University has seen a 102% in research expenditures over the last decade, driven by targeted efforts to secure larger federal grants, expand industry-sponsored grants, and enhance philanthropic support for research endowments and faculty-led initiatives.

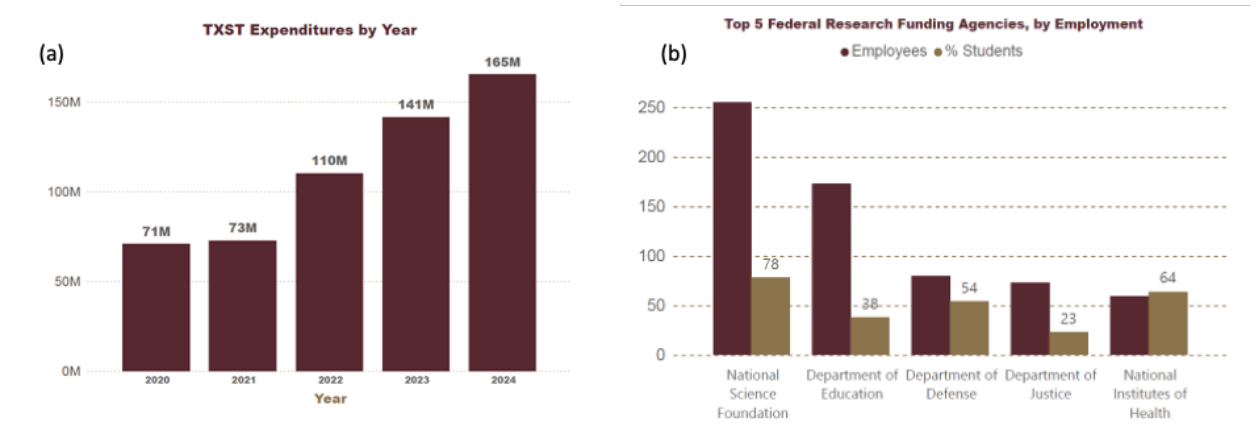

Figure 2. 2.a Total R&D Expenditures, 2.b. TXST employment by federally funded research grants, with percentage of total comprising students.

Key efforts to expand external funding revolve around faculty, staff, doctoral students, and postdoctoral scholars.

- **Faculty recruitment and start-up packages:** Research-oriented faculty are the driving force behind research activity that leads to sponsored funding. Faculty innovation and interests dictate the types of funding that the University can pursue. Whereas the Office of the Provost, in close cooperation with departments, leads faculty hiring, the Division of Research provides the bulk of funding for start-up packages that encourage faculty to join Texas State and help to lay the foundation for their research careers—and pursuit of funding.
- **New staff**: New staff hires within the Division of Research have expanded the University's capacity to support faculty in developing high-quality, highly competitive proposals that are more likely to lead to sponsored funding. The University has also hired

new technical and support staff (e.g., program managers, grant writers) whose work is directly related to research.

- **Expanded doctoral programs:** The development of new research doctoral programs is central to the University's plans to increase research expenditures. Texas State must invest significantly in the launch of new doctoral programs, but these programs are expected to sharply increase research capacity and expenditures.

Whereas federal and state funding are expected to remain the primary sources of sponsored research funding, Texas State has laid the foundation for greater industry-sponsored research. University Advancement has reinvigorated its Corporate and Foundation Engagement team by adding two directors of corporate engagement, and explicitly linking them to the Run to R1 initiative. This team has played a pivotal role in strengthening industry partnerships, resulting in a significant increase in industry-sponsored research agreements, as well as seventy-five new corporate partnerships that are anticipated to lead to more industry-sponsored research. The vice president for Round Rock Campus is leading corporate outreach on the northside of Austin, especially among engineering and health sciences companies. Two new assistant vice presidents in the Division of Research have responsibilities that include growing corporate funding for research. Two new corporate collaborations that have yielded research funding include multiple semiconductor companies and a solid rocket motor development company.

The University reorganization that led to the creation of the Division of Research in 2023 led to internal expansion and realignment leading to two new offices: the Office of Research Development, intended to stimulate more participation in sponsored research and overall growth in external funding, and the Office of Innovation and Commercialization, intended to grow intellectual property disclosures; tech transfer and licensing opportunities; and entrepreneurial

activity. Texas State sees these long-term investments as critical for advancing research, development, and innovation.

Research Facilities

Texas State operates high-performing research facilities across multiple sites in two cities: Round Rock and San Marcos. Round Rock Campus, which houses the College of Health Professions, sustains numerous health-care laboratories and clinics and that serve teaching, research, and service delivery needs. A new building under construction at Round Rock Campus, Esperanza Hall, will include purpose-built research labs, primarily for science and engineering. Texas State is in the advanced stages of exploring the development of a life sciences incubator in Round Rock in order to tap into the expanding life sciences and medical device research and development market in northern Austin. The incubator is expected to synergize faculty research and industry needs.

In San Marcos, research facilities are embedded in all major academic buildings, within faculty and departmental labs, and in the Shared Research Operations facilities. Additional research facilities include the 3,500-acre Freeman Research Center (a working ranch) and multiple freestanding research centers such as the Forensic Anthropology Research Center and Texas School Safety Center. The Advanced Law Enforcement Rapid Response Training (ALERRT) Center is planning a major expansion of its physical campus, on the east side of San Marcos, to grow its training and research related to law enforcement. All of these major facilities support sponsored research. Anticipated new research facilities—including a new mathematics building and a new chemistry building in San Marcos that are part of the campus master plan (awaiting final review and approval by the Texas State University System Board of Regents in

Spring 2025)—will further expand research capabilities. Beyond these major investments in facilities, Texas State makes continuous investments in building and departmental renovations, as well as investments for lab improvements made in connection with start-up packages for new faculty.

Commercialization

In 2023, the Division of Research created the Office of Innovation and Commercialization to expand tech transfer as a component of increasing research productivity. Tech transfer plays an important role in increasing research productivity by facilitating the movement of innovations and discoveries from research institutions into practical applications in the market that make significant societal and economic impact—regionally and globally. Texas State has seen a 40% increase in parents and licensing agreement over the last five years.

By managing the intellectual property rights of research innovations, tech transfer safeguards academic research and creates faster pathways for innovations to reach the end user and benefit them longer than the typical 20-year lifespan of a U.S. patent. Tech transfer also helps researchers connect with different types of potential research sponsors (e.g., federal, industry, venture capitalists, angels, etc.) that can bring research closer to market. Moreover, tech transfer initiates and encourages internal research collaborations between individuals and departments, as well as external collaborations that can lead to better access to expertise, resources, and market insights. Collaboration around tech transfer with industry opens new opportunities for researchers to work on applied research, allowing them to explore novel directions within traditional academic settings. The creation of the Office of Innovation and Commercialization

was a strong signal that Texas State is deeply committed to expanding tech transfer as a component of sponsored research.

Beyond supporting tech transfer activities, Texas State has invested in efforts to grow commercialization, innovation, and entrepreneurship more broadly. Technology transfer connects faculty innovation with external markets (commercialization), creating a feedback loop that encourages further discovery and development. The Office of Innovation and Commercialization proactively engages with faculty through regular meetings and targeted outreach to increase the number of invention disclosures. Each disclosure represents a potential pathway for research and commercialization, and by expanding the pipeline of technologies, we help ensure that more research outputs are positioned for real-world application. Texas State's Office of Innovation and Commercialization provides actionable feedback on every invention submission, helping researchers understand what steps are needed to further develop or de-risk their innovations. This process not only improves the quality of technologies entering the commercialization pipeline, but also helps faculty think strategically about how to align their research with future funding and partnership opportunities. Through a generous intellectual property policy, Texas State shares 50% (net) of royalties with inventors. The University also recognizes inventors each year with patent awards, thus leading to greater visibility of innovation-related endeavors across campus and encouraging other researchers to engage in the innovation and commercialization process.

Every external innovation marketing effort includes promoting not only the technology itself, but also the inventors, the research strengths of Texas State, and the University's facilities. By highlighting the full value proposition of Texas State's inventions, the University supports the research community in building stronger relationships with industry. Each marketing effort

targets potential industry partners, ensuring wide exposure and ongoing conversations about how Texas State can contribute to solving problems. These efforts will help shift external perceptions and position Texas State as a go-to source for innovation and applied research.

III. Doctoral Programs

Texas State historically had a very limited number of doctoral programs, with its first doctoral program launched in 2002, and each program remained small in terms of numbers of matriculated students and graduates. As of 2023, the University had only 12 doctoral research degrees. However, as part of Run to R1, Texas State sought approval for 11 new doctoral degrees, of which eight are research doctorates. Two of these programs—civil engineering and integrated molecular and biophysical chemistry—have been approved and admitted their first students in fall 2024. Three new programs will enroll the first students in fall 2025—electrical engineering; mathematics; and mechanical and manufacturing engineering. Three other degree programs—construction management; engineering management; and Doctor of Business—have been approved by the Texas Higher Education Coordinating Board and are awaiting accreditation. Additional programs are in the planning stages; Texas State anticipates submitting proposals for new doctoral programs on a yearly basis. The University's investment in expanding doctoral programs is critical for expanding research. Among other reasons, doctoral programs attract and retain high-caliber researchers, they allow existing faculty to expand the scale and scope of their research, and they create a larger, more complex research ecosystem that stimulates bold new research ideas that can attract external investments.

Doctorate Awards

Beyond creating new doctoral programs that expand institutional and individual capacity to develop sponsored research activities, Texas State has invested heavily in direct support for doctoral students to support their degree progress and graduation. Limited financial support meant that students took longer to complete their degrees. To remedy this, the University invested in 100 Run to R1 research assistantships and tuition scholarships to eliminate financial barriers to completion. Recipients are expected to graduate during the 2025-2026 academic year. Texas State has also created dissertation completion fellowships to help get students over the finish line to graduation.

In addition to faculty developing these high-impact degree completion activities, Texas State has invested resources in all stages of the doctoral experience. As part of its efforts to provide professional support and academically relevant training, the Graduate College provides dissertation writing workshops for doctoral students. Given that quality mentorship is a significant component of the graduate experience, all associate deans in the Graduate School have endorsement from CIMER—the Center for the Improvement of Mentored Experiences in Research—as facilitators of "Entering Mentoring" workshops and offer trainings in collaboration with the Office of Faculty Development. All doctoral program directors are CIMER-trained mentors. In collaboration with the Office of Faculty Development, the Graduate College provides workshops for faculty and staff on topics related to doctoral education such as best practices in admissions, using data to keep students on track, and co-publishing with students. The Graduate College also provides approximately 50 workshops for graduate students per year

on topics related to degree completion, research activities, mental health and well-being, and career development.

Supports for Doctoral Candidates

Beyond the Run to R1 financial investments in doctoral students, the University as a whole and the Graduate College offer targeted, responsive guidance that supports doctoral students at every stage of their degree progress. The University funds teaching assistantships and research assistantships, and increasingly, research-active faculty are able to include tuition and salary support for doctoral students in their research grants. When doctoral programs are created, each program is assigned a certain number of funded, three-year doctoral teaching assistantships and and doctoral instructional assistantships. Beyond the third year, students are supported via faculty members' grants. Additional students, beyond the number receiving institutional funds, are supported fully by faculty members' grants. Doctoral stipends are higher ($29,000-$36,000) than those for master's students, allowing students to pay for in-state tuition and living expenses. Additional support from the Graduate College includes merit fellowships for a student's first year of study, which cover up to 50% of the tuition for eligible students; scholarships of up to $3,000 per year for continuing students; and doctoral research support fellowships of $5,000 to cover expenses related to a student's dissertation research. Finally, the Graduate College employs two full-time external fellowship coordinators and shares a third with the IDEA Center, the office that coordinates undergraduate research. These staff professionals help students to apply for external funding from federal funders, foundations, and industry. In 2023-2024, students applied for $4 million in external funding and were awarded $850,000.

Areas of Emphasis

Texas State has followed THECB guidelines for the creation of all of its new degree programs. Thus, for all new degree proposals, Texas State has completed workforce need studies using data from the Texas Workforce Commission and the Bureau of Labor Statistics. For each proposed new degree program, Texas State has documented both workforce need and student demand and that existing programs in Texas cannot meet the articulated need.

IV. Plan for Faculty Development

Texas State is in the midst of expanding the Office of the Provost to offer greater support for all facets of faculty development. As Texas State's student body and faculty grew rapidly over nearly a ten-year period, administrative support lagged. With the arrival of a new provost in 2024, Texas State made a commitment to bolstering the academic and professional infrastructure that faculty need to succeed. This infrastructure includes the personnel needed to recruit and onboard new faculty.

New Faculty

Each year, Texas State hires up approximately 50 tenured and tenure-track faculty. Applicant pools continue to be highly competitive, indicating that Texas State is a desirable place for new faculty at all ranks. Texas State recruits new research-active faculty through a variety of means. The addition of new graduate programs, particularly doctoral programs, has proven especially attractive to new faculty. These programs are resourced with multiple new faculty lines phased in over a five-year period. Texas State submitted proposals to the THECB in summer 2023 to jump-start nine new research-oriented doctoral programs. Each has new faculty lines that contribute to

Texas State's research, development, and innovation goals. Most new faculty receive highly competitive start-up packages that allow them to quickly launch their research activities and pursue sponsored funding. Start-up packages in the sciences and engineering typically include the acquisition and installation of new research equipment and instrumentation, which contributes to Texas State's research infrastructure.

Through strategic faculty hires in priority research areas, such as water or AI or health sciences, Texas State can truly build greater research capacity at the faculty level. Thanks to funding made available by the Texas University Fund, Texas State is able to make significant investments in research infrastructure, which is highly attractive to new and existing faculty. In its recruitment of senior and experienced faculty, Texas State plans to use the governor's University Research Initiative to attract the highest caliber of research faculty.

Faculty Research

Beyond the academic department that serves as a faculty member's professional home, the Office of Faculty Success has institutional responsibility for assisting faculty in enhancing research and creative expression and fulfilling their overall responsibilities and goals. Toward that end, Faculty Success works in tandem with the Division of Research to coordinate programs and workshops designed to improve and facilitate faculty efforts toward procuring external funds. Faculty Success offers a wide range of popular programs that support faculty research and creative expression, including the following annual programs:

- **New Tenure-Track Orientation** connects new tenure-track assistant professors with other new tenure-track faculty members; informs them about Texas State policies and procedures; and helps them explore career and scholarly opportunities at Texas State.

- The **Scholarship and Teaching Excellence Program** is a yearlong program that provides new tenure-track assistant professors with a strong foundation in research, teaching, and scholarship.
- **What's Next? Charting Your Path** supports mid-career faculty as they navigate the next step in their careers, including increasing research productivity and/or promotion from associate professor to full professor. During the 2023 cohort, 100% of the associate professors who participated in the program attained the rank of full professor the following year.

The Office of Faculty Success also offers topical programs to promote research innovation, effectiveness, and success. Future plans include hiring a full-time Assistant Provost of Faculty Success who will have a split appointment between Faculty Success and the Division of Research. This person will lead established programs and develop new ways to support faculty, including identifying faculty who have the potential to compete for national and international award winners, and then supporting their nominations and applications.

The Division of Research offers additional programming for faculty at all career stages, from funding the services of external consultants for assistance applying for early-career awards such as the NSF CAREER award, to providing workshops and grant-writing support, to awarding internal grants that stimulate new research directions. The Division of Research's Research Accelerator Fund supports emerging and high-need financial requests that are directly related to sponsored research activity.