

STRATEGIC PLAN

2030



LSU

College of Science

Over the 2022-2023 academic year, the LSU College of Science engaged in a comprehensive strategic planning process informed by significant research, data analysis, and stakeholder engagement. Nearly 600 total points of input via surveys, interviews, and focus groups generated rich data and key insights from each of our college's major stakeholder groups – university and college leadership, faculty, staff, students, non-enrolled students, donors, and community partners. We sincerely thank you all for your time and input and the role this engagement has served in directly informing both this plan and the exciting future that awaits us.

This strategic planning process was guided by a dedicated steering committee, who worked closely with college leadership for nearly a year to review comprehensive data related to our college's current and future state, benchmark ourselves against other leading colleges of science, inform how we engage with our stakeholders and what we do with the information we learn from them, and ensure the future strategies we put in place are reflective of this data and college-wide engagement.

We are particularly grateful for each of these committee members' time, leadership, commitment, and service to our college and all those we serve and support – both today and in the years to come.

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LETTER FROM THE DEAN



Dear College of Science Community,

I am continually proud of the crucial role our faculty, staff, and students serve in driving the future of our state and shaping the world around us.

The LSU College of Science is at the forefront of scientific research and innovation that positively impacts the state of Louisiana, our nation, and the world. Our talented faculty conduct groundbreaking research that spurs new discoveries and solves grand challenges. We have the unique privilege of helping so many students and community members discover their passion for science and preparing tomorrow's leading scientists for rewarding careers in education, medicine, research, business, public service, and more. And our exceptional, dedicated faculty and staff help enable this work by living each part of our college mission in innumerable, impactful ways each day.

I am excited to present this strategic plan, which is designed to elevate the tremendous work of our college today and take it to even greater heights by 2030 and beyond. It is the direct result of feedback and conversations with our college community and all those who took the time during our yearlong planning process to lend your perspectives, thoughts, and energy to help build the exciting vision toward which we now work.

As you will see in our strategic plan, we have a strong foundation from which to build in the coming years, but we also have much to do to make this vision a reality. We must continue to push ourselves and the boundaries of science to cement our international standing as a leader in research. We must continue to support our students and ensure they have positive, impactful experiences that help them reach new heights. We must build an environment where our faculty and staff can do their best work. We must build on the significant economic and community impact we have on our state. And we must make the necessary investments that enable and amplify our impact.

The priorities, goals, and strategies our strategic plan contains will each serve key roles in guiding this work and helping us achieve our vision. I look forward to working with our entire community to make this plan and our future a reality.

Geaux Science and Geaux Tigers!

Cynthia B. Peterson, Dean
Seola Arnaud and Richard V. Edwards, Jr. Professor

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INTRODUCTION

The LSU College of Science is a leading force in LSU, the state of Louisiana, the nation, and the world for scientific discovery, world-class research, and educating the next generation of leaders in the sciences.

Our impact is routinely elevated across the environments and geographies in which we operate. We serve as the primary pipeline of talent for Louisiana's healthcare industry and medical fields and invest decades in history-making discoveries, like when researchers first detected gravitational waves through the Laser Interferometer Gravitational-wave Observatory (LIGO) in Livingston, La., with leaders of the global LIGO collaborative earning the 2017 Nobel Prize in Physics. Our college also teaches the majority of LSU students in science courses, with freshman enrollment increasing 5% year after year and teaching demand accelerating in foundational science courses. As a Carnegie Research-1 designated university, LSU is consistently at the cutting edge of academic excellence and research innovation. Our College of Science is a key driver of this prominent classification, being a primary source of grants and sponsored research for LSU's research enterprise. In 2021, our college secured over \$34 million in research funding, with a significant portion of these grants awarded by leading federal agencies such as the National Science Foundation, the National Institutes of Health, the Department of Energy, and the Department of Defense.



The breadth of these impacts on communities, economies, and industries across the world directly reflects the commitment of our faculty, staff, students, alumni, and supporters to the high-caliber teaching, research, and discovery for which it is known. Our college's five academic departments – Biological Sciences, Chemistry, Geology & Geophysics, Mathematics, Physics & Astronomy – and the Museum of Natural Science feature more than 300 faculty and nearly 100 staff dedicated to advancing our college's mission and serving our stakeholders.

Over the past several years, LSU and the College of Science have grown significantly in enrollment. This growth represents both an opportunity and an ever-evolving challenge for our college. We continue to work to keep pace with this burgeoning student population, with a clear demand for quality, qualified instructors to meet students' instructional needs, support staff to help advise and guide students throughout their academic journey, and the modern infrastructure necessary to recruit and retain high-quality teaching faculty and researchers. The Our Lady of the Lake Health Interdisciplinary Science Building represents a vital first step in addressing these needs, with partners and supporters recently helping to fully fund the facility's construction that will provide for interdisciplinary and high-impact collaboration across academic disciplines, research efforts, and public-private partnerships. We must build on this major accomplishment in working with LSU and external partners to further invest in the infrastructure that enables and elevates the college's impact – from large-scale facilities to individual research laboratories.

We have a tremendous opportunity to grow, expand, adapt, and create new programs and drive innovation that directly informs the role science serves in advancing our state, nation, and world. Our Louisiana economy continues to evolve; we must position our college to contribute directly to this evolution and our state's economic success, from research and service to directing our graduates to opportunities that enable them to stay in Louisiana and be part of this future impact. Major transitions are currently underway in sectors like energy, which will need an 80% increase in graduates of related fields to meet industry growth in the coming decades, and space science, as the world's second space race continues to evolve, fueled by the proliferation of orbiting commercial and intelligence technology. Other huge opportunities await in areas like data science, biomedicine, materials science, ecosystem interdependence, extreme environments ranging from plant tolerance to life on Mars, and other interdisciplinary programs that can bring together departments and colleges to address the world's grandest challenges in science – right from LSU's campus, with the College of Science at the nucleus of this work.

These are opportunities that cannot be achieved alone.

Our college's success is heavily supported and enabled by our culture of philanthropy, with dedicated alumni, industry partners, and even active faculty committed to major gifts that have a meaningful impact on students, research, and service across the college. We will continue to prioritize this culture and demonstrate to our supporters the significant role their partnership serves in elevating our college's work. The same holds true for all those on whom we rely and with whom we collaborate – including other colleges and universities, funding agencies, industry partners, and communities throughout Louisiana and beyond. The future of our college will prioritize collaboration and interdisciplinarity at all levels and across all three pillars of LSU's land-grant mission.

We must continue to focus on and prioritize our LSU Science community. The aftereffects of the COVID-19 pandemic continue to be felt by many, contributing to an ever-increasing demand for mental health and other programs and services that help our students feel supported throughout their college experience – from onboarding as new students, to collaborating with and learning from others in our community, to seamlessly and intentionally offboarding our graduates into new careers or to continue their academic journey. Student needs are rapidly evolving with a very different profile of students entering college today and varying levels of college readiness when students arrive on campus. Our faculty and staff are navigating similar challenges in overall well-being and appropriate staffing and support to continue meeting the growing needs of all those we serve. This commitment will remain true and of paramount importance to how we build and maintain an environment where all our employees, students, and stakeholders feel a true sense of belonging and can do their best work – both within the college and beyond as we develop scientific and societal solutions that meet the needs of the world around us.

As we think about our future as a college, we recognize the tremendous opportunity in front of us to reinforce our college's position as a preeminent scientific resource that leads in both discovery and education in new and exciting ways. We are prepared to seize this opportunity as we continue building upon our legacy of excellence and innovation and setting the foundation of success for the next generation of STEM leaders in our state, nation, and world.

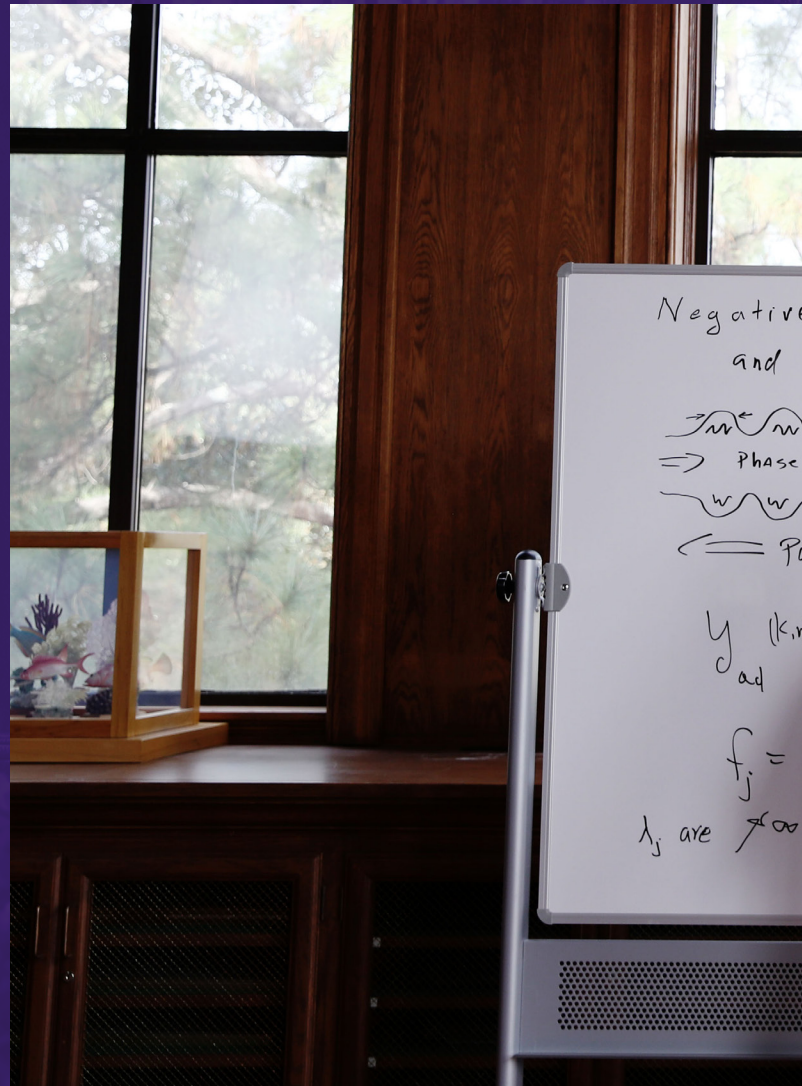
MISSION, VISION, AND VALUES

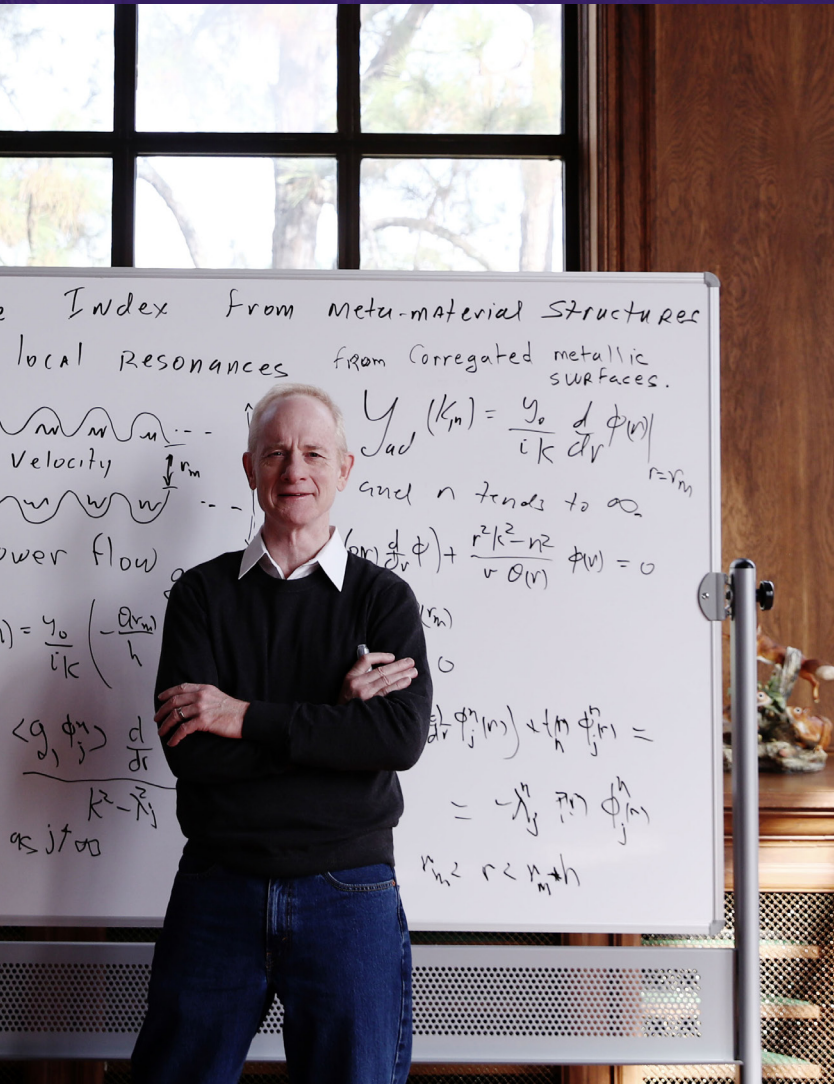
OUR MISSION

As the primary scientific intellectual resource of Louisiana and a leader in the nation, the College of Science champions research, discovery, and teaching by developing innovative scientific research programs and offering a superior quality education for students for the benefit of Louisiana and beyond.

OUR VISION

The vision of the College of Science is to be an international leader in scientific research and instruction, elevating LSU to the highest level of excellence among major research universities in the U.S. and the world.





OUR VALUES

- **Seek excellence**
- **Build big ideas**
- **Invite collaboration**
- **Offer support**
- **Cultivate creative approaches**
- **Include a range of perspectives**
- **Make it accessible**

STRATEGIC PRIORITY FRAMEWORK

Our strategic plan is guided by a framework with five overarching priority areas to guide our focus, programs, activities, and investments in the coming years. Each strategic priority includes a top-line imperative or goal representing the target we are working toward, along with key strategies and initiatives for how we intend to reach these targets and outcome metrics we will track throughout the plan's implementation to monitor and ensure our success.





01

REINFORCE THE COLLEGE'S REPUTATION AS A NATIONAL AND INTERNATIONAL LEADER IN RESEARCH

OUR IMPERATIVE

Generate groundbreaking research that leads to unprecedented discovery and transformative innovation.

CONTEXT

As we embark on a new era of scientific exploration and discovery, we recognize the pivotal role our college's research plays in shaping our understanding of the world and driving societal progress. Building on our reputation for answering the big questions and making discoveries that shape our knowledge of the world around us, we are committed to continuing to elevate and support the breadth and depth of the research produced within the college.

Each of the disciplines within the College of Science conducts vital, innovative research. Our research changes the world – from Biological Sciences, where advancements are revolutionizing basic biomedical research, agriculture, and environmental conservation, to Geology & Geophysics, which is contributing to our knowledge of climate change, coastal protection and restoration, natural resource management, geological hazards, and the origins of our planet.

As we look to the future, there are real opportunities for us to continue to leverage these strengths as we expand our research in areas that include agriculture and food security, biomedicine and biotechnology, the coast and environment, defense and security, and energy and energy transition in alignment with the university's Scholarship First Agenda. Emerging high-demand areas like new solutions for sustainability or innovation in space science represent "big ideas" that can propel the university forward in both national and international contexts, leveraging our standing as a land, sea, and space-grant institution to develop interdisciplinary approaches, programs, research teams, and centers and institutes that advance major scientific discovery and attract significant funding and visibility to LSU. There is also an imperative to elevate and expand the influence of our Museum of Natural Science, with collections that are a premier resource for the research community across the world that also help inform dialogue around science.

However, as the questions our researchers seek to answer evolve and grow over time, so must our internal structures and processes evolve to appropriately support our research enterprise. The landscape of research is rapidly evolving, driven by emerging technologies, data-driven approaches, and interconnected global challenges. To capitalize fully on these opportunities, it will be crucial for us to embrace interdisciplinary collaboration as a new norm, rather than an exception to how we conduct our research. In the College of Science, we recognize the power of interdisciplinary research in tackling complex problems that transcend traditional disciplinary boundaries. By building interdisciplinary teams that integrate expertise from across our diverse departments, and from departments external to the college or located within other institutions, we can foster innovation, accelerate scientific progress, establish impactful connections, and position our researchers to engage in groundbreaking discovery and address the grand scientific challenges facing our society.

We will promote a culture that values collaboration and fosters a spirit of intellectual curiosity, encouraging researchers to engage in cross-disciplinary interactions and the exchange of ideas. To facilitate interdisciplinary collaboration, we will establish dedicated research centers and institutes that serve as incubators for innovation and enable researchers to work across traditional departmental boundaries. We will also develop targeted funding, supports, and incentives to encourage interdisciplinary research proposals and reward successful collaborations.

Furthermore, we recognize the importance of investing in advanced research infrastructure, state-of-the-art laboratories, and cutting-edge technologies that support the evolving needs of our researchers. We will prioritize these research-focused investments wherever possible in coordination with other priorities and strategies throughout this strategic plan.

As we embark on this strategic plan, the College of Science is committed to supporting research as a priority area. By harnessing the strengths of our diverse disciplines, embracing interdisciplinary collaboration, and modifying our internal structures and processes, we will position ourselves at the forefront of scientific discovery.



KEY STRATEGIES

Innovation

- Relentlessly pursue major federal funding for research centers
- Establish longer-term research agendas and identify related projects that tackle “big” problems
- Expand partnerships with federal and private industry partners in high-demand, high-growth areas like energy science, data science, bioscience, materials science, and coastal science
- Advance space science by increasing efforts in multi-messenger astronomy and planetary science and championing an interdisciplinary space-time institute that builds on existing scientific prominence and attracts major new funding and programs to LSU
- Work with other regional universities like Southern University and A&M College to coordinate research collaborations, grant applications, and other major research initiatives

Structures, Supports, and Resources

- Provide incentives, supports, and spaces to encourage collaboration among faculty, staff, and students and drive the pursuit of larger-scale grants
- Expand the availability of seed funding for both single-PI and interdisciplinary projects
- Support staff professional development related to research skills or research-related administrative support
- Expand post-award management structures, supports, and resources in coordination with the LSU Office of Research and Economic Development
- Expand college-level travel support and resources for students, staff, and faculty
- Work with university and community partners to provide short-term housing solutions for visiting scholars
- Establish partnerships, exchanges, or programs with international institutions for study abroad and visiting scholars

Outreach and Communication

- Increase/broaden communication of research successes and discoveries in all areas of research throughout the college
- Increase facility awareness and utilization of alternative research funding streams
- Develop college-level colloquiums and interdepartmental research exchanges to form awareness and relationships among potential research collaborators
- Increase college faculty nominations for career award packages

Outcomes

- Increase in college and departmental rankings for research expenditures
- Increase in interdisciplinary research funding
- Increase in NIH-funded research
- Establish a major NSF-funded research center
- Increase in industry-sponsored research funding
- Increase in faculty research publications



02

ENHANCE HOW WE EDUCATE AND SUPPORT OUR STUDENTS

OUR IMPERATIVE

Provide all students with positive, impactful experiences that prepare them for future careers and lifelong learning.

CONTEXT

We are committed to providing a supportive environment that empowers our undergraduate and graduate students to thrive academically, professionally, and in life.

Our large graduate program in science and mathematics, with students in all five academic departments and the Museum of Natural Science, is a cornerstone for our success as a research university. As mentors and educators who aim for excellence, we dedicate ourselves to identifying and adopting strategies to best educate and support graduate students, working closely with them to ensure their success at the next level. Our graduate students are not only core to our research and teaching mission, but they represent the next generation of researchers in both industry and academia – and they are crucial parts of how we will advance our college's research priorities.

In recent years, the landscape of higher education has witnessed a shift in the needs of students in general – and the same holds true in the College of Science. Our students expect more than just access to courses and resources. They seek comprehensive, personalized, and timely support for their entire educational journey. This is as true for traditional academic and career advising as it is for rapidly emerging needs like access to affordable and nutritious food, housing security, and mental health support. We must prioritize holistic support services and collaborate with our university and community partners to address these critical needs as an integral part of our commitment to student success.

We are committed to providing our students with a robust academic experience and a comprehensive support system that fosters well-being and removes barriers to student success. By evaluating and streamlining our processes, we can make it easier for students to navigate and utilize existing resources. We will also work to ensure our students have the guidance and support they need to excel academically and achieve their career goals by expanding our college's student-centered practices through improved communication channels, enhanced advising services, and more intentional connectivity among our students and alumni. One way we excel in supporting students is with our Science Residential College (SRC), where first-year students majoring in the College of Science can live in Evangeline or Highland Hall in the Horseshoe and take classes with the same group of peers. The SRC is currently constrained in both space and overall capacity. We must expand this program in terms of its structure, footprint, and related support staff as a clearly defined way to provide students with the resources they need to succeed in our college.

Furthermore, we recognize the importance of flexibility in meeting the diverse needs of our students while maintaining our college's standards of excellence. In some instances, this can mean exploring alternative course delivery formats and expanding online learning options. In others, it may include the development of customizable degree pathways. Through such measures, we are focused on helping students align their educational aspirations with their unique interests and career goals and benefit from a fulfilling learning experience in our college.

As we move into the future, we are focused on recognizing these and other changing student needs in real time – expanding support systems, adapting curricula, and embracing a culture of continuous improvement that not only reacts to changing dynamics and student needs, but counts on it. Only then will we be able to create an environment where every student can thrive and fully prepare for impactful careers and lifelong learning.



KEY STRATEGIES

Intentional and Strategic Focus on Student Success

- Align total faculty in the college to meet the growing student population
- Expand structures and services for students, including incoming freshmen, transfer, and nontraditional students
- Work with the LSU Graduate School to identify ways to improve graduate student advising and build a community for college graduate programs
- Expand college-level student wellness and mental health resources in coordination with LSU Mental Health Services and expand faculty and staff knowledge of these resources
- Expand the capacity and participation of the Science Residential College (SRC) in coordination with Residential Life
- Establish structure, staffing, and funding for a university-wide Prehealth Advising Center in coordination with university and industry partners
- Focus on professional development and best practices to train the next generation of science faculty on effective teaching methods

Curriculum

- Assess and implement options for flexible scheduling in the college that enables students to more quickly earn their degrees
- Expand SCI 1001 by recruiting more faculty and connecting students with peer mentors early in their college experience
- Review, assess, and modify curriculum based on relevance to the student population and discipline or industry needs

- Establish new coursework or programs focused on emerging areas of need like technical and scientific communication
- Expand interdisciplinary, co-taught courses across departments
- Grow partnership with the LSU Ogden Honors College to expand course offerings, lecture series, and coordination of living communities for Honors students
- Develop college-level strategies and guidance for productively incorporating artificial intelligence into learning experiences

Communication and Resource Navigation

- Be a strong advocate to drive university-wide 12-month graduate student pay, stipends, and benefits
- Collaborate with the LSU Office of Enrollment Management to identify ways to enhance new student onboarding and establish clear pathways upon major declaration
- Enhance student awareness of and access to student organizations
- Empower students to serve and get involved in community engagement and the outreach portions of the college's mission
- Establish and expand hardship resources for students in coordination with the LSU Foundation
- Expand the peer mentoring program with additional mentors and mentees with supporting structures and resources
- Enhance and streamline access to resources and guidance for international student populations

- Enhance student career preparation in coordination with the LSU Olinda Career Center (e.g., providing more streamlined access to career counseling resources, establishing greater connectivity to college alumni as well as business and industry, and holding events and workshops for students that expand beyond academic and health-related careers)

Outcomes

- Provide competitive graduate funding packages that exceed the LSU minimum
- Decrease average length of time to degree for graduate students
- Reduce average undergraduate class size
- Increase in first-to-second-year undergraduate student retention
- Increase four- and six-year graduation rates
- Increase in the number of students accepted to professional schools and graduate programs
- Increase in the number of students in college graduate programs
- Increase in student satisfaction and engagement survey results

03

BUILD A CULTURE OF EXCELLENCE, PRIDE, AND SUPPORT

OUR IMPERATIVE

Be known as the best college of science in the nation for faculty and staff to work.

CONTEXT

As we establish and advance our priorities for the coming years, the College of Science remains committed to attracting and retaining exceptional faculty and staff members from around the world.

The changing nature of higher education has resulted in new and evolving roles for faculty and staff. They are increasingly expected to provide comprehensive support to students, including mentorship, advising, and fostering supportive learning environments, in addition to their research, teaching, and service expectations. This is particularly true in our college, with continually increasing teaching demand for science courses, a focus on maintaining and growing the most significant research operations within the university, and a constant need to position our students and researchers alike to help address the most pressing scientific challenges our state, nation, and world face.

Recognizing these expanded expectations, our strategic plan emphasizes providing resources, professional development opportunities, and support systems to enable our faculty and staff to excel in their diverse roles and do their best work. This plan also recognizes the importance of establishing a strong culture of community, which enhances overall engagement and promotes a thriving academic environment. We commit to cultivating a vibrant and supportive community within the College of Science, making it a place where faculty and staff feel valued, connected, and inspired. We will invest in initiatives that promote collaboration, knowledge sharing, and interdisciplinary interactions, fostering a sense of belonging and purpose across our departments, programs, and units.

The well-being of our faculty and staff is paramount to their success and overall satisfaction in their roles. This is particularly crucial given the expanded expectations and needs of our workforce while educating unprecedented levels of students and navigating the challenges and strain caused by a global pandemic. In support of this, we strongly emphasize promoting faculty and staff well-being and mental health as both fundamental to achieving our goals and an imperative for our college community.

We will also continue prioritizing robust communication to ensure faculty, staff, and our broader college community are well-informed about our initiatives, achievements, and opportunities. We will expand our platforms and programs to encourage collaboration, solicit feedback from our stakeholders, and foster a transparent and supportive environment where everyone can contribute to the collective success of our college.

Perhaps most crucially, we are committed to making tangible investments in our workforce, recognizing the importance of competitive compensation and benefits in retaining and recruiting high-quality faculty and staff. We will focus continually on ways to increase salary and benefits packages for our faculty and staff while identifying and funding other programs that help meet the needs of our workforce and position our college as an employer of choice.

Collectively, we will take the necessary steps in the coming years to create an environment where our faculty and staff can thrive – personally and professionally.



KEY STRATEGIES

Culture and Community

- Expand engagement and collaboration across the college through events and activities that build community
- Develop structures, policies, and measures that help promote a strong work-life balance
- Conduct real-time pulse checks and surveys of faculty and staff
- Expand mentorship strategies for new faculty and staff
- Continue prioritizing structures and supports that foster a sense of belonging, and well-being for faculty and staff

Communication

- Expand the college website to provide more up-to-date resources and information that help facilitate cross-college connectivity, relationships, and awareness
- Improve onboarding of new faculty and staff to the College of Science community, including more formal connections to college-level resources, processes, and toolkits
- Establish committee(s) on emerging pedagogical trends and technologies like artificial intelligence to share best practices and real-time developments impacting teaching and learning

Recruitment and Retention

- Retain and recruit high-quality faculty, staff, and postdoctoral researchers
- Expand college support and resources for international faculty
- Establish succession plans for key staff and leadership positions
- Expand professional development, training, and onboarding support for faculty and staff
- Increase salary and benefits packages for faculty and staff
- Formalize and expand the college's spousal hires program for new faculty and staff hires

Outcomes

- Increase in faculty and staff retention rate
- Provide competitive faculty and staff total compensation relative to the market
- Align college demographics with the demographics of Louisiana
- Increase participation rate in professional development and mentoring programs
- Increase the number of international students, faculty, and visiting scholars
- Increase in faculty and staff satisfaction and engagement survey results



04

ENHANCE THE ECONOMIC IMPACT AND VISIBILITY OF HOW SCIENCE POSITIVELY BENEFITS THE STATE OF LOUISIANA

OUR IMPERATIVE

Expand and communicate our economic impact across Louisiana and beyond.

CONTEXT

The LSU College of Science is a vital contributor to the economic and intellectual capacity of Louisiana. Through this strategic plan, we are focused on enhancing the economic impact and visibility of the transformative work conducted within our college.

The LSU College of Science makes significant direct and indirect contributions to Louisiana's economic growth and development. Through our research endeavors, we produce award-winning basic and applied research that leads to scientific breakthroughs, technological advancements, and innovative solutions to real-world problems. Our collaborations with industry partners, government agencies, and community organizations result in job creation, industry advancements, and the attraction of external funding to the state. Furthermore, as the preeminent pipeline of science educators and healthcare professionals for Louisiana, we play a crucial role in building a skilled workforce that drives the state's scientific and healthcare sectors.

Despite the remarkable impact of our college, these contributions are often not widely known or fully understood. For example, much of the discovery our faculty undertakes is basic research, which can be challenging to fully describe or connect to external audiences but represents significant potential to positively impact our society and world. We strive to emphasize the importance of effectively communicating our achievements, the significance of our research, and the transformative outcomes we generate. Expanding our communication and outreach efforts will be a cornerstone of this work. We will leverage various platforms and channels, both traditional and digital, to disseminate information about our research breakthroughs,

collaborative partnerships, and success stories of our graduates. We will also build on successful initiatives like SciArt, which was a cornerstone of our last strategic plan and provides a sound foundation for connecting STEM and arts disciplines to drive additional public interest and engagement in these areas. We must work intentionally to describe the vital work taking place in our college and expand how we engage the broader community, policymakers, industry leaders, and the general public to foster a deeper appreciation for the value of science and its impact on Louisiana's economy, health, and well-being.

Broadening our knowledge base and enhancing our engagement with our state contributes to our efforts to build upon the already significant economic impact we have on Louisiana. By raising awareness of our college's immense capacity and a better understanding of the state's needs, we can design innovative programs, expand the reach of existing ones, build new partnerships, and conduct even more meaningful research that aligns with Louisiana's economic priorities. These efforts will diversify and amplify our impact, benefiting our state in distinct and valuable ways.

As we move into the future, we are committed to enhancing and raising the visibility of the economic impact science has on Louisiana. By telling our story, expanding communication and outreach efforts, and highlighting the transformative outcomes of our research, we will ensure that our contributions to the state's intellectual capacity, workforce development, and economic prosperity are widely understood and provide a foundation upon which we can take our state's economy, communities, and residents to even greater heights.



KEY STRATEGIES

Economic Engagement

- Develop programs to connect students more intentionally with alumni (e.g., informational sessions, on-campus meetings, job shadowing, mentorship, and internships)
- Establish formal partnerships with economic development organizations and industry groups to connect real-time industry needs with college academic, research, and service programs
- Expand industry partnerships/engagements by better linking basic research to application
- Work with the university to expand the commercialization of research and patents

Programming

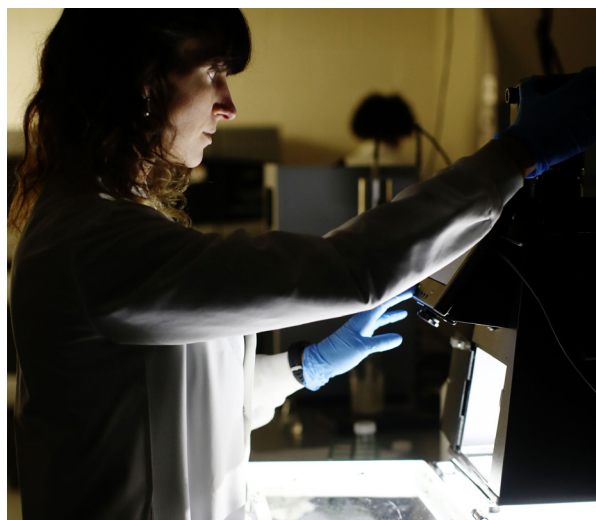
- Build a robust pipeline of future students for the entire college through in-person outreach such as recruiting events, youth outreach events, student groups at the Museum of Natural Science, and presentations about future careers at secondary schools
- Develop more robust events and outreach and engagement programs to communicate the college story and impact and build stronger external partnerships (e.g., colloquiums, workshops, and panel discussions with business and industry)
- Expand and build upon the foundation of the SciArt Initiative, including new SciArt projects and enhancing the program's visibility among faculty and students

Communication

- Equip faculty and students with the opportunities, resources, and tools to tell their research stories
- Develop strategic social and digital media approaches to highlight prominent alumni to key audiences
- Pursue national and international awards, recognition, and positions for college faculty and staff
- Expand collaboration with the LSU Office of Enrollment Management to better market college majors and science careers to potential students
- Develop communications highlighting awards and achievements in science to the public
- Develop video production infrastructure to document and promote videos of student, faculty, staff, and alumni experiences
- Develop marketing and communication materials for students about career opportunities in Louisiana post-graduation

Outcomes

- Grow total reach, impressions, and engagement rates associated with College of Science communications
- Increase in annual faculty, staff, and student honors or awards received (statewide, regionally, nationally, and internationally)
- Increase in patents issued to college faculty
- Increase in licensing revenue generated by college faculty
- Increase in total annual outreach events and programs in which the college participates or organizes
- Increase in alumni and/or donor satisfaction survey results



EXPAND ACCESS TO STATE-OF-THE-ART INFRASTRUCTURE AND INSTRUMENTATION

OUR IMPERATIVE

Provide world-class infrastructure that enables our faculty, staff, and students to produce their best work.

CONTEXT

The pace of scientific research is constantly increasing and evolving. To enable faculty and students within the College of Science to continue producing and scaling world-changing discoveries and educating leaders in science, the university and college must continue investing in the underlying infrastructure that makes this impact possible.

We recognize the immense potential that lies within our college's talented researchers and scholars. Our college is home to preeminent researchers who have achieved international recognition for their contributions to their scientific disciplines. However, we must prioritize expanding access to state-of-the-art infrastructure and cutting-edge instrumentation to unlock our fullest capabilities and push the boundaries of our collective scientific discovery. By doing so, we can provide our researchers with the necessary tools and resources to elevate their work to new heights, attracting top talent and accelerating breakthroughs in their respective fields.

There is a clear appetite for investment in enhancing our physical resources. The College of Science will soon break ground on the new Interdisciplinary Science Building, which is slated to open in late 2025 thanks to over \$150 million committed by the State of Louisiana and individual and corporate philanthropists. The partnership between LSU and Our Lady of the Lake Health to catalyze funding for this new facility is an example of prioritizing key infrastructure needs and utilizing innovative partnerships to turn a vision into reality that expands access to world-class infrastructure. This collaboration sets the stage for future investments in standalone labs and large-scale facilities that can provide our scholars with the tools and resources they need to accelerate their work and make groundbreaking discoveries.

Work over the past several years has culminated in a College of Science facilities master plan that outlines steps for upgrades to existing facilities and the next capital project that will augment our training of new science professionals and increase our research capacity.

Investing in state-of-the-art buildings and instrumentation benefits our researchers and has a profound impact on our students. Access to industry-standard equipment and training creates an immersive learning environment where students can gain practical experience and develop skills that are in high demand in their respective fields. Moreover, by providing our students with opportunities to work with advanced instrumentation, we prepare them to be competitive and well-prepared professionals in the scientific workforce. There are cost-savings benefits to the university as well. Rather than individually and inefficiently renovating labs to attract and onboard new faculty hires, we are focused on making more strategic and intentional investments across our college's entire footprint that may require a more upfront investment but deliver longer-term, more efficient, and coordinated infrastructure.

Enhancing our infrastructure and physical resources also strengthens our ability to attract and retain top graduate students, faculty, staff, and external funders and partners. World-class facilities and cutting-edge instrumentation send a powerful message to potential collaborators and recruits, signaling our commitment to providing an environment that prioritizes and amplifies their research. By investing in our physical resources, we can compete globally and draw exceptional talent to advance our mission of scientific excellence.

The LSU College of Science is committed to expanding access to state-of-the-art infrastructure and instrumentation as a key priority in our strategic plan. By aligning our physical resources with the stature of our preeminent researchers, we can accelerate breakthroughs, drive discipline-shifting research, and attract top talent. This investment in our infrastructure also benefits our students, positioning them for success in their future careers. Through intentional and strategic investments in our physical resources, we will foster an environment that nurtures innovation, collaboration, and scientific excellence.



KEY STRATEGIES

Resources, Systems, and Structures

- Work with the LSU Office of Research and Economic Development to enhance faculty access to shared research equipment and instrumentation
- Complete and fully equip the Interdisciplinary Science Building for maximum scientific and educational benefit, then work with university, state, and external partners to refine plans and develop funding streams for the next science facility on LSU's campus
- Develop a process for assigning oversight and maintenance responsibilities of common instruments
- Expand fundraising and grow endowment with a specific focus on ongoing facility maintenance, lab renovations, teaching spaces, and other capital needs

Communication

- Engage the college community in the development of next-generation facilities for the college
- Increase faculty knowledge of existing infrastructure and how best to utilize or navigate policies and processes involving equipment procurement and use
- Provide transparent and consistent internal communication about the status of renovations, buildings, and general access
- Increase funding and sponsorships for student instrumentation needs
- Integrate faculty perspectives into fundraising and development for research infrastructure
- Hold legislative "open house" to showcase the current state of facilities to public funders

Outcomes

- Reduction in deferred maintenance
- New investments from grants, philanthropy, and industry funding for college infrastructure and instrumentation
- Improvements in college facilities (research and teaching spaces)
- Expanded space and instrumentation for state-of-the-art research and teaching in the college



MOVING OUR COLLEGE FORWARD

This strategic plan charts a course for the future of the College of Science, with priorities and strategies that will propel our college to new heights of competitiveness and impact.

As we move forward, we are focused on remaining true to the core of our plan while recognizing there may be situations or unforeseen events that cause us to adapt in the face of a shifting landscape. The three years that preceded the development of this plan are a prime example of the importance of this philosophy, where a global pandemic upended lives, economies, and education institutions. Higher education is also rapidly evolving, with decreased college enrollment nationwide and a demographic cliff beginning to set in that further exacerbates the challenges universities are navigating to maintain enrollment, productivity, and overall relevance. Even though we embrace agility and recognize its importance in the context of planning, we are also focused on achieving our imperatives and implementing the strategies that will make these successes possible.

That is why it is so crucial that we regularly monitor our progress toward these goals, working with all of our internal and external stakeholders to develop additional plans and position the systems, structures, and resources to make them a reality. Our departments are key partners in our college's success. As this plan is completed, each of our departments will develop their own strategic plans that align with the priorities and strategies of our college plan, ensuring that we are all working together to advance our mission and consistently serve and support the entirety of our science community.

We also recognize that the College of Science does not operate in a vacuum. Other colleges, non-academic units, external partners, universities, and LSU as a whole are key collaborators in how we will achieve our vision. We are prepared to work in close coordination and collaboration with these and other partners to accelerate our work through this plan, aggressively pursue and seize new opportunities that align with our priorities, and identify how we can best utilize limited resources to drive transformative change for our state, nation, and world.

The College of Science is poised for a bright future. With our outstanding faculty and staff, strong student body, tremendous partners, and a clear plan for the future, we are prepared to achieve our vision and be an international leader in scientific research and instruction. The future holds immense potential, and our college is eager to seize the opportunities that lie ahead. By remaining committed to our strategic plan and embracing a culture underscored by trust, communication, innovation, service, and intentional investments that advance our priorities, we will continue to build upon our foundation of excellence and achieve even greater heights in elevating LSU to the highest level of excellence among major research universities in the U.S. and the world.

LSU

College of Science

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