Search for the Dean
Tulane University School of Science and Engineering
New Orleans, LA

THE SEARCH

Tulane University, one of the nation's most prestigious research institutions, seeks a visionary and ambitious leader to serve as its dean of the School of Science and Engineering (SSE). Created in 2006, SSE is unique as the only academic unit at a major research university to merge the behavioral sciences, physical sciences, life sciences, engineering, and mathematics, which provides an unusually rich environment for innovative programs and interdisciplinary research.

Founded in 1834, Tulane is a member of the distinguished Association of American Universities (AAU) and offers degrees across a broad array of schools: architecture, business, law, liberal arts, medicine, public health and tropical medicine, the sciences and engineering, and social work. It is known for its highly collaborative environment, and it has nurtured innovative interdisciplinary programs on critical issues of global and local significance. Tulane's emphasis on community service and practical experience infuses its programs, culture, and community. With 8,549 undergraduate and 5,923 graduate students, Tulane takes pride in providing a personalized experience for its students who take part in research across the university and provide thousands of hours of public service to the greater New Orleans community. Tulane is integrally connected to the vibrancy and diversity of New Orleans and its culture.

Reporting to the Senior Vice President for Academic Affairs and Provost, the dean will continue to build upon the strong foundation and national reputation of SSE for producing cutting-edge research and for its pedagogical excellence. They will oversee all aspects of the school's operations, including academic affairs, administration and planning, financial management, student recruitment and career placement, institutional advancement, and alumni engagement. The dean must possess a record of leadership and academic administration experience as well as an earned doctorate in a relevant field. As the academic leader of the community, the dean should bring a record of outstanding scholarship and impact. The dean will have an energic and collaborative leadership style that inspires faculty, students, and staff around a shared SSE vision. The dean will oversee twelve academic units and lead 200 faculty, including both tenure-track faculty and professors of practice, who together account for nearly $25 million in annual sponsored research expenditures. Research figures have more than doubled in the last five years and are up 20% from 2022 as a result of major investments from the university and SSE leadership to support faculty and scholarly endeavors. SSE has an operating budget of $60 million and educates about 2,610 students, including 2,130 undergraduates and 480 graduate students.

TULANE UNIVERSITY

Tulane University is a member of the AAU, and the Carnegie Foundation for the Advancement of Teaching ranks Tulane as a university with "very high research activity." Tulane attracts an outstanding student body that is both intellectually curious and driven by community engagement. The university's 8:1 undergraduate student-to-faculty ratio allows Tulane undergraduates to receive the personalized attention of a smaller liberal arts college along with access to the resources and opportunities of a major research institution. In 2006, Tulane became the first major research institution to require public service as a graduation requirement, which led to the Carnegie Foundation recognizing Tulane with its Community Engagement Classification. In 2023, Tulane's total research expenditures were $202.1 million, up 15% from 2022 and up 70% in the past six years.

The university is organized into ten academic divisions: Newcomb-Tulane College, A.B. Freeman School of Business, School of Architecture, School of Professional Advancement, School of Law, School of Liberal Arts, School of Medicine, School of Public Health and Tropical Medicine, School of Science and Engineering, and the School of Social Work. The mix of schools is an asset that is rich with opportunity for cross-school collaboration in research and education. The Tulane faculty totals over 1,200 full-time members with a staff of approximately 2,900. As of 2021, Tulane's distinguished faculty had received 34 National Science Foundation CAREER Awards, 10 Guggenheim Foundation Fellowships, eight National Endowment for the Humanities Fellowships, and three Alfred P. Sloan Fellowships in the preceding 25 years.

THE SCHOOL OF SCIENCE AND ENGINEERING

The School of Science and Engineering is a relatively young school that was developed strategically to capitalize on the natural synergies between science and engineering disciplines. It has pioneered a new model for integrated science and engineering education and research and positioned Tulane to be a leader in the STEM disciplines. It recognizes the role that information technology, biotechnology, and nanotechnology play in today's global economy and aims to provide its students with the necessary skills to be leaders in discovery and innovation.

SSE provides an environment in which scientists and engineers work together in an integrated organization on problems of mutual interests, where current research in engineering is informed by current research in science and vice versa, and where students, regardless of their major field of study, have the opportunity to explore concepts and methods of both science and engineering. The school comprises eleven academic departments: Biomedical Engineering, Cell and Molecular Biology, Chemical and Biomolecular Engineering, Chemistry, Computer Science, Earth and Environmental Sciences, Ecology and Evolutionary Biology, Mathematics, Physics and Engineering Physics, Psychology, and River-Coastal Science and Engineering. Faculty from a broad array of disciplines regularly organize around important research themes in centers and institutes such as the Tulane Brain Institute and the Tulane Bywater Institute. In addition, the school houses the Neuroscience Program, a Bioinnovation Interdisciplinary

Doctoral Program, and a Biological Chemistry Interdisciplinary Bachelor's Degree. Information on the departments and programs can be found in Appendix A.

SSE has been an extremely successful hub of research on the Tulane campus. The faculty of SSE expends approximately $25 million dollars in research, generates over 500 articles in refereed journals, and files over 15 new patents annually. In addition, SSE supports numerous opportunities for undergraduate research activity and is home to flourishing graduate programs. SSE graduates the largest number of doctoral students at Tulane. Among the 168 tenure-track faculty are 13 endowed chairs and 17 endowed professors. Many of these endowed positions are affiliated with the university's interdisciplinary research centers that capitalize on the close-knit and collaborative Tulane environment.

SSE has partnered with the university to expand its facilities with the development of a new, five-story, state-of-the-art building, Paul Hall, which is set to open in the spring of 2024. Overall, SSE occupies roughly 300,000 square feet of space across nine buildings, including a state-of-the-art MakerSpace.

As part of the mission to engage in the local community, SSE supports a K-12 STEM Education Outreach program. The program exposes young students to STEM in meaningful and appealing ways with projects such as the Robotics Bayou Regional Competition.

RESEARCH, ENTREPRENEURSHIP, AND INNOVATION

Over the last decade, Tulane has seen a period of historic growth and has invested heavily in research, innovation, and entrepreneurship initiatives across the university. Tulane is committed to continuing strategic investments that deepen the university's commitment to world-class research. Nearly half of the $1.5 billion dollars raised by Tulane's *Only the Audacious* fundraising campaign has been allocated to support research through investments in infrastructure and increasing the number of endowed faculty positions at the university. Building upon the success of the previous campaign, the next iteration, *Always the Audacious*, will support 21st-century advances in climate, river and coastal sciences, emerging infectious diseases, brain health, healthy aging, health equity, and much more while expanding and increasing lab spaces and infrastructure for translational research.

The university continues to make major investments in infrastructure to keep up with the extraordinary growth in research activity and the ambitions of Tulane's faculty. This includes efforts like the Tulane University Translational Science Institute (TUTSI), which brings together researchers from Tulane School of Medicine, School of Public Health and Tropical Medicine, School of Science and Engineering, and School of Social Work to find better ways to diagnose, treat, and prevent disease and translate scientific discoveries into medical practices that improve patient care and public health. Other areas of investment include data sciences, artificial intelligence, and coastal mitigation. Recently, longtime Tulane supporters Libby and Robert Alexander donated more than $12 million to advance a university-wide data science initiative that will transform teaching and research across all disciplines at Tulane and position the university as a leader in data pedagogy. Tulane's Data Hub, founded in 2021, will be renamed the Connolly

Alexander Institute for Data Science and will foster data literacy and science through education, research, and service to the community. In addition, the U.S. Economic Development Administration has designated the Gulf Louisiana Offshore Wind Propeller (GLOW), a consortium that includes Tulane University, as one of its 31 new Tech Hubs. Scientists, researchers, and scholars from Tulane's School of Science and Engineering, the A. B. Freeman School of Business, and the Tulane Center for Energy Law will all play a role in the Tech Hub. In partnership with Louisiana State University, Tulane University has been awarded $22 million by the National Academy of Science, Engineering, and Medicine to lead a 15-member consortium, the Mississippi River Delta Transition Initiative, to chart a new course for the Lower Mississippi River Delta and its fragile ecosystem.

Steadfast in its commitment to innovation, Tulane's downtown campus is home to the Tulane Innovation Institute, which will act as a combined technology and startup accelerator for faculty, researchers, staff, and students, as well as community members. By carefully assessing and investing in the commercial potential of basic and applied research, the Tulane Innovation Institute will "de-risk" discoveries and provide early-stage funding necessary to propel ideas to the next level – ultimately bringing new ventures to market, all while economically diversifying Greater New Orleans for future generations. Tulane also recently established the Tulane Ventures Fund, a $10 million dollar fund to support business startups by women and minority entrepreneurs in New Orleans. These important efforts will help to transform the university's technological and entrepreneurial enterprises and will have longstanding impacts on the regional economy.

THE ROLE OF THE DEAN

Reporting to the provost, the dean serves as the chief academic and executive officer of the School of Science and Engineering, empowering faculty, ensuring student success, leading, developing, and supporting staff, and representing SSE within the university and in the broader world. The dean promotes a culture of innovation and excellence within SSE and fosters collaboration across the university and with key external partners.

The dean collaboratively sets the vision and strategic direction for SSE with its dedicated community of faculty, students, and staff. The dean has primary responsibility for a $60 million annual operating budget in a responsibility centered university budget system. In addition, the dean is the chief ambassador for SSE and stewards relationships with SSE's alumni base of 26,337, community and government groups, and industry and research partners.

The dean oversees department chairs and school directors for the 12 academic units as well as directors of several institutes. Direct reports to the dean also include the associate dean for research, faculty affairs, and graduate studies; associate dean for EDI, strategic innovation, and master's programs; associate dean for undergraduate programs; the assistant dean for finance and personnel; director of development; and director of K-12 STEM outreach.

LEADERSHIP OPPORTUNITIES AND CHALLENGES

The primary opportunities and challenges for the next dean include the following:

Rally the community around a shared vision that sustains the momentum of SSE and defines its next phase of growth and evolution.

SSE boasts scholarly excellence across a wide range of disciplines, and it recruits exceptional faculty to its ranks. As a relatively young school, the dean must continue to nurture cohesion among department chairs, institute directors, and faculty leadership and develop a unified plan for SSE to achieve its ambitious goals. The plan should draw on Tulane's history and distinctive elements such as the university's founding commitment to medicine and global public health, a focus on issues of regional and global significance through efforts like the Bywater Institute, Energy Institute, and the new Tulane Innovation Center, which build on Tulane's close relationship with the City of New Orleans and the Gulf Coast more broadly. The dean needs to articulate the strategy to all SSE constituents and inspire others to contribute to the school's goals and objectives that are part of its next phase of growth, development, and success.

Manage a complex organization and continue investments in sustainable infrastructure.

SSE is a vibrant academic community in the midst of a period of growth. As the demands on facilities and resources grow, the dean must evaluate the structure of the dean's office and its administrative support services to ensure that faculty, staff, and students can achieve their goals. The dean must ensure that SSE develops necessary staff resources and manages staff congenially to continue delivering on SSE's mission and to allow faculty to thrive in their research and academic work. The dean will also be attentive to the career development desires of SSE staff and provide opportunities for advancement, ideally within SSE.

The dean will ensure that the structure of the office reflects the strategic priorities of the school and efficiently uses its resources for maximal impact with transparency to the constituents. As SSE continues to hire faculty and expand its research footprint, the next dean must also attend to sustainable space planning and continue renovation programs that balance space requirements for research and education. Tulane's location in New Orleans should inform its strategies for infrastructure, emphasizing thoughtful approaches to the environment and sustainability. SSE has conducted a strategic space planning study, which will help inform the dean on how to manage incremental and longer-term updates to best support faculty, staff, and students.

Recruit, retain, and develop eminent faculty and promote research excellence.

In collaboration with department chairs and center directors, the dean will lead efforts in the recruitment and professional development of an exceptional faculty that includes tenure-track faculty, professors of the practice, instructors, lecturers, visiting professors, and adjunct faculty. The dean will develop and foster strategies to hire into priority areas and attract world-class scholars to campus. SSE recruits talented scholars with bold ambitions for their research programs, and the dean will ensure that they are empowered to grow their programs, compete for funding at the highest level, expand center-scale activity

to the institution, and keep pace with growing undergraduate enrollment. The dean will build on existing strengths, seeking opportunities for cluster hires, and promote SSE and its people on a national level. This leader will also bring a multifaceted understanding of excellence, an interest in promoting convergent research, and a recognition that collegiality, diversity, equity, and inclusion are integral to Tulane's mission and imperatives for research and teaching excellence.

Continue the growth of students and faculty and expand the impact and visibility of SSE.

The diversity of departments within SSE presents a variety of opportunities. Some programs are among the largest undergraduate majors at the university and need to expand the faculty to meet their teaching and research demands, while other programs have opportunities to expand enrollment at the undergraduate and/or master's level. Tulane is a single-admissions university, which presents an opportunity for the dean to work in close collaboration with the Vice President for Enrollment Management and Dean of Admissions to identify novel avenues to attract prospective students and ensure robust undergraduate interest across all programs. The expansion of master's programs in select areas is seen as a strong opportunity to meet learner needs while also growing SSE's resource base. The dean will need to align incentives so that departments, faculty, and staff understand and share in the benefits of expanding its programs while also ensuring that the quality of instruction remains at a high level of excellence. As enrollment grows, the dean must pay careful attention to achieving the right balance of tenure-track faculty, professors of practice, and staff to deliver its programs.

As an AAU, Carnegie R1 Doctoral University with very high research activity, graduate education is critically important to SSE's research and educational missions. The dean should be attentive to the need to reinforce, grow, and market PhD programs to expand the research footprint and provide career development opportunities.

Champion and enhance a climate of diversity, equity, and inclusion.

The dean must possess a deep understanding and fierce commitment to diversity, equity, and inclusion, including an acute sense of the particular challenges within the fields of science and engineering. Specifically, the dean must be the champion for initiatives to recruit, support, and retain women and underrepresented groups at all levels within the faculty, staff, and student populations. The dean will also foster a positive and inclusive culture that is welcoming and supportive and prioritizes student success for all learners.

Strengthen SSE's financial standing through program development, philanthropy, and thoughtful resource management.

The dean will be a vocal champion to a range of external audiences and potential funders for the ways in which SSE is changing the world. The dean must publicize the accomplishments of faculty, staff, and students and be a tireless advocate to generate resources to fuel the school's continued success. In collaboration with the development team, the new dean will cultivate advancement opportunities to

strengthen the financial base of the school. This will include high-level engagement with major donors and alumni, as well as seeking new individual, industry, and corporate partners to provide additional resources. The dean will also continue to promote alternative sources of revenue creation in line with its educational mission, such as online programs, master's or certificate programs, or corporate education. The dean will be a creative and resilient problem-solver and make a case for seed investment from the university or other sources as necessary. An astute understanding of finances and the relationship between academic priorities and budget will be important for the next dean to be successful.

QUALIFICATIONS AND CHARACTERISTICS

Tulane seeks in its next dean an exceptional leader with integrity, energy, ambition, and entrepreneurial creativity. While no single candidate may meet all of the qualifications, the search committee expects that candidates will demonstrate many of the following personal qualities and professional experiences to inspire and lead the School of Science and Engineering to new levels of excellence:

- An intellectual leader with academic stature; a distinguished teacher and scholar with experience in a leading research institution;
- A deep, demonstrable appreciation for and understanding of the wide variety of science and engineering disciplines represented within the school;
- An experienced academic administrator with a track record of success; an astute understanding of finances and budget, and a desire for financial transparency;
- Experience developing strong teams and leading a dedicated team of staff;
- A highly collaborative individual with exceptional interpersonal skills to work effectively with a variety of partners inside and outside of the university; the ability to engage broadly and inspire enthusiasm for the potential of the school;
- An adept communicator who can articulate the distinctive narrative of the school; the ability to cultivate key external constituencies and to fundraise;
- Experience recruiting and developing outstanding faculty;
- A strategic thinker and builder; an orientation to pursue promising programmatic opportunities and implement them effectively; an interest and vision for the development of convergent research centers that link departments at Tulane;
- An appreciation of the importance of expanding master's programs in some disciplines and developing new revenue models;
- Belief in and support for the importance of undergraduate learning and research experiences;
- A demonstrated commitment to diversity, inclusion, and equity; and,
- A deep understanding of the current trends and emerging opportunity areas for research funding; a demonstrated track record of developing strategies to increase or diversify research funding streams and support world-class research.

APPLICATIONS, INQUIRIES, AND NOMINATIONS

Tulane University has retained Isaacson, Miller, a national executive search firm, to assist the dean of the School of Science and Engineering search committee in its identification and review of candidates. Please direct all inquiries, nominations, referrals, and applications in strict confidence to:

John Muckle
Karen McPhedran
Afi Tettey-Fio
Isaacson, Miller
www.imsearch.com/open-searches/tulane-university/dean-school-science-and-engineering

Tulane University is an Equal Employment Opportunity/Affirmative Action (EEO/AA) employer committed to maintaining a non-discriminatory, diverse work and learning environment. Tulane does not discriminate on the basis of race, color, sex, religion, national origin, age, disability, genetic information, sexual orientation, gender identity, gender expression, pregnancy, marital status, military status, veteran status (or any other classification protected by applicable law) in any of its programs, activities, or employment. This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation, and training.

APPENDIX A

Leadership

President Michael Fitts is the 15th president of Tulane University. He arrived at Tulane in July 2014, bringing with him a strong emphasis on heightening cross-disciplinary education and research. President Fitts believes students and higher education institutions can set themselves apart in a fast-changing world and ever-shifting economy through the combining of different fields and skills. In his first year at Tulane, he launched task forces to lead the university in deepening its unique strengths for interdisciplinary collaboration. He sees powerful advantages in the university's manageable size, its wide selection of professional schools, and the unified undergraduate college.

Previously, President Fitts served 14 years as Dean of the Law School at the University of Pennsylvania, where he was recognized for greatly boosting their offerings in interdisciplinary education. He also presided over a quadrupling of Penn Law's endowment, a more than 40 percent increase in the size of the law school faculty, and a doubling of all forms of student financial aid. President Fitts is a native of Philadelphia. He earned a Bachelor of Arts degree from Harvard University and received his Juris Doctorate from Yale Law School.

Provost Robin Forman was appointed Senior Vice President for Academic Affairs and Provost in September 2016. He previously served as Dean of the Emory College of Arts and Sciences and the Asa Griggs Candler Professor of Mathematics at Emory University. He has held faculty and administrative appointments at Rice University and has served as an instructor at MIT and as a visiting professor at the University of Burgundy, Harvard University, and the Mathematical Research Institute. Dr. Forman received a Bachelor of Arts and a Master of Arts in mathematics from the University of Pennsylvania and a doctoral degree in mathematics from Harvard University. His research, which has been funded by the National Science Foundation, the National Security Agency, and the Defense Advanced Research Projects Agency, focuses on combinatorial methods in topology and geometry.

APPENDIX B

Departments & Programs

- **Department of Biomedical Engineering:** The Department of Biomedical Engineering has been a global leader in biomedical engineering scholarship since 1977. Its mission is to inspire and work with students so they develop and apply engineering methods to confront health science challenges. The major domains of research are biomechanics and biotransport, biomaterials and tissue engineering, and biomedical imaging and bioinformatics. The department offers BSE, MS, and PhD degrees.

- **Department of Cell and Molecular Biology:** The Department of Cell and Molecular Biology offers the highest quality teaching to its students and prepares them for the rapid advances, as well as the long-term trends, in the fields of developmental biology and neuroscience. The research in the department currently focuses on two areas: Developmental and Regenerative Biology and Neuroscience. The CMB faculty

members are also actively engaged in cancer, environmental, and energy-related research. The department seeks to strengthen its research and teaching focus to include regeneration medicine and neuroplasticity by increasing recruitment counts of new faculty. It offers BS, MS, and PhD degrees.

- **Department of Chemical and Biomolecular Engineering:** The Department of Chemical and Biomolecular Engineering strives to be internationally recognized as a leading chemical and biological engineering department that exemplifies the dual commitment of outstanding research and education, producing high-quality graduates who are creating knowledge and developing innovations. Its research areas represent new and exciting directions in Chemical Engineering, centered on the themes of advanced materials, biomolecular engineering, and novel environmental technologies. It offers BSE, MS, and PhD degrees.

- **Department of Chemistry:** The Department of Chemistry has been committed to high-quality teaching and research since its founding in 1834. The department is devoted to furthering our understanding of the physical world through fundamental research. The faculty includes 14 research faculty members and three lecturers trained at the leading universities in their respective disciplines. While the specific areas of research are diverse, the department has historical strengths in four major areas: organic synthesis, with a particular focus on biologically and medically important materials; physical chemistry, with a strong focus on laser spectroscopy; inorganic synthesis; and organic and inorganic reaction mechanisms. The university also has a wealth of instrumentation for the characterization of molecular species, including four FTNMR spectrometers, GC/mass spectrometers, FTIR spectrophotometers, and X-ray crystallographic facilities. In addition, there is a wealth of laser facilities for applications in spectroscopy and materials science. It offers BS and PhD degrees.

- **Department of Computer Science:** The Department of Computer Science, now in its fifth year, emphasizes both core computer science and its application to related areas in the sciences and engineering, as well as the health and social sciences. Its educational goal is to be a leader in training the next generation of computer scientists who work at applying computer science at the interface with related disciplines. It offers the PhD degree, as well as a coordinate major that can interface with the undergraduate major in SSE or other schools.

- **Department of Earth and Environmental Sciences:** The mission of the Department of Earth and Environmental Sciences is to develop, apply, and disseminate scientific knowledge about the Earth and Earth's systems throughout its 4.6 billion-year history. The department offers a BS degree in both geology and environmental science. Each program combines field investigations with laboratory experiments and theoretical studies to prepare our students to understand the physical, chemical, and environmental processes that govern the Earth. Research is conducted in a number of facilities, including the quaternary research laboratory, the sediment dynamics laboratory, the environmental biogeochemistry laboratory, the surface processes laboratory, the sedimentary processes laboratory, and a computer laboratory. It offers BS, MS, and PhD degrees.

- **Department of Ecology and Evolutionary Biology:** The Department of Ecology and Evolutionary Biology prepares students for a wide range of disciplines, from biology, environmental science, and conservation to law, medicine, and public health. It emphasizes three main areas of academic inquiry: tropical biology, wetlands ecology, and global change biology. The faculty study organisms, populations, communities, ecosystems, and global systems through conservation biology, ecosystem ecology, environmental biology, evolutionary biology, global change, tropical ecology, and systematics. Research is centered geographically in the subtropics — especially Louisiana — and the tropics, although researchers explore life in other regions of the Earth as well. Students and faculty researchers have access to a centralized instrumentation facility that includes state-of-the-art transmission and scanning electron microscopes and extensive facilities located in the adjacent Center for Bioenvironmental Research. Other facilities include a greenhouse, growth chambers, and facilities for the culture of aquatic organisms. It offers BS, MS, and PhD degrees.

- **Department of Mathematics:** The Mathematics Department at Tulane University offers a PhD degree in Mathematics, Master of Science degrees in Mathematics, Applied Mathematics, and Statistics, as well as the BS degree. The main areas of research can be divided into applied and computational mathematics, algebra and theoretical computer science, topology and geometry, and probability and statistics.

- **Department of Physics and Engineering Physics:** Tulane University's physics program was established in 1895, and the undergraduate engineering physics program in 2006. The department offers BS, BSE, MS, and PhD degrees. The faculty maintain a wide range of research interests in both theoretical and experimental research programs, including, but not limited to, Quantum Simulation and Computing, Theoretical Solid-State Physics, History of Physics, Relativity and Cosmology, Materials Engineering, Quantum Materials, Polymer Physics and Biophysics, and Nanodevice Physics. In addition, the department utilizes state-of-the-art research facilities, including the Tulane Center for Polymer Reaction Monitoring and Characterization, Tulane Micro/Nano Fabrication Facility, Low-Temperature Condensed Matter Lab, Tulane Coordinated Instrumentation Facility, and the Cypress: High-Performance Computing System.

- **Department of Psychology:** The Department of Psychology houses the largest undergraduate BS major in SSE and offers graduate training at the doctoral level in School Psychology and Psychological Science. It also offers Master of Science degrees in Behavioral Health and Psychological Science. It contributes to interdisciplinary majors, including Neuroscience, Early Childhood Education, Cognitive Studies, Women's Studies, and African and African Diaspora Studies. Primary areas of research include learning and memory, school-based mental health, stereotyping and prejudice, and behavioral health/health disparities.

- **Department of River-Coastal Science and Engineering:** Founded in 2017, River-Coastal Science and Engineering is SSE's newest academic department. The department is envisioned to be a unique educational enterprise that will focus on the world's river, deltaic, and coastal systems using the combined science and engineering approach pioneered by the School of Science and Engineering. By fusing civil, environmental, and coastal ocean engineering disciplines with elements of the geosciences and ecological sciences, the goal is to educate a new generation and new breed of scientists, engineers, planners, and

decision-makers that can address the complex, interdisciplinary problems in river-coastal systems associated with changing climate, sea level rise, and the human overprints of the natural landscape. The interdisciplinary aspect of this new department's educational and research mission will also draw heavily upon the deep expertise of faculty and staff partners working on water-related issues in other departments within the School of Science and Engineering and in Tulane's other schools, as well as foster collaboration with local and regional government scientists.

- **Neuroscience Program:** The Tulane University Neuroscience Program was established in 1986 as the first interdisciplinary doctoral program at Tulane. In the early 2000s, the Neuroscience Program expanded to include an interdisciplinary undergraduate major and a master's program, each of which has grown to be among the largest and most successful at the university. Neuroscience Program students are trained within the growing and vibrant Tulane Brain Institute that draws from faculty on the main campus, the health sciences campus, and the National Primate Research Center in a range of fields, including Psychology, Biology, Anatomy, Physiology, Pharmacology, Biomedical Engineering, and Chemical Engineering.

APPENDIX C

Faculty Research Center Affiliations

Science and Engineering Research Centers in SSE:

Center for Anatomical and Movement Sciences (CAMS) – provides anatomical resources to departments across the uptown campus. CAMS main lab offers a unique human dissection experience to undergraduate and graduate students from the nine departments associated with SSE. Additional labs provide hands-on experience with accelerometry, electromyography, metabolic assessment, spirometry, and other movement-related physiology.

Center for Computational Science (CCS) - is the first center established in the Gulf region to focus on computational science research projects across many disciplines. The Center provides an infrastructure for investigators interested in computational science to exchange ideas, produce research, and establish new collaborations.

Center for Polymer Reaction Monitoring and Characterization (POLYRMC) - one of the world's premier centers for research and development in polymerization reaction monitoring, it is involved in comprehensive monitoring of polymerization reactions, accelerating the creation of new materials, and promoting full-scale reactor control.

Tulane Biodiversity Research Institute (TUBRI) - historically functioning as a natural history museum, comprising research collections of invertebrates, fishes, amphibians and reptiles, birds, mammals, and vertebrate fossils, only the Royal D. Suttkus Fish Collection is being retained, and TUBRI now specializes in biodiversity discovery (primarily in fishes) and biodiversity informatics research.

Interdisciplinary Research Centers with SSE Affiliation:

Center for Aging - dedicated to the strengthening of training and service in the areas of geriatric medicine and gerontology in cooperation with the Section of General Internal Medicine and Geriatrics in the Department of Medicine and the School of Social Work, respectively. Our educational activities reach beyond the university and into the community.

Center for Bioinformatics and Genomics - promotes bioinformatics, computational biology, and translational research of human complex diseases/traits with the goal of accelerating the pace of scientific discovery, reducing mortality, and improving the quality of life.

Center for Stem Cell Research and Regenerative Medicine - devoted to developing new therapies for a series of common diseases, including osteoporosis, osteoarthritis, Parkinsonism, spinal cord injury, stroke, diabetes, and Alzheimer's disease.

Tulane Brain Institute - founded in 2016, builds upon the over 30 years of success of the Tulane Neuroscience Program. The university-wide Brain Institute was created as a transdisciplinary entity to coordinate and oversee neuroscience-related endeavors at Tulane and brings together faculty from across the university, including from the main Campus, the health sciences campus, and the Tulane National Primate Research Center. The three pillars of the Tulane Brain Institute are research, education and training, and community outreach and engagement. Our vision is to create a new era of discovery, learning, and public influence in the brain sciences at Tulane.

Tulane ByWater Institute – currently in development, the ByWater Institute will further accelerate the city's transformation into a world-renowned hub for innovation. The center is being developed in phases, with the first phase including new laboratory, educational, and conferencing facilities, along with staging areas for field operations. In the long term, the goal is to redevelop the entire wharf into a riverfront promenade alongside a research and education district that dovetails with the Morial Convention Center as well as nearby residential, commercial, and retail development.

Tulane Cancer Center - devoted to enhancing teaching, research, and patient care at Tulane, fostering scientific discovery, translating research advances into clinical cancer care, and improving cancer prevention and early detection.

Tulane Hypertension and Renal Center of Excellence - was established to centralize and coordinate research activities related to cardiovascular, kidney, and hypertension diseases.

Tulane Institute for Integrative Engineering for Health and Medicine - developed by Tulane's Departments of Biomedical Engineering (BME) and Chemical and Biomolecular Engineering (CBE) to enhance collaborations between SSE and Health Sciences. The strategy is to bring engineering and

biomedical science research together through shared facilities and interactions. This stimulates intellectual activity, research, and graduate/post-doctoral training opportunities, leading to the development of transformational medical technologies and devices.

Tulane-Xavier Center for Bioenvironmental Research (CBR) - The Tulane-Xavier Center for Bioenvironmental Research (CBR) has a mission of conducting and facilitating environmental research through cross-disciplinary partnerships and collaborations. As an academic center under the Office of Research at Tulane, the CBR supports the university's mission of academic excellence while at the same time engaging government, community, and other academic organizations. The CBR and its partners take advantage of the natural laboratory of the region to address questions of global concern. With an emphasis on achieving a sustainable balance between natural and human systems, the CBR continually strives to enhance programs in energy, environment, and resilience.