



We thrive at the intersection of education and research

Hands-on research in the sciences, engineering and mathematics enables students in the School of Science and Engineering to be fully engaged in the scientific life.

“We thrive at the ‘intersection of education and research’—the point at which learning leads to discovery,” says Dean Nick Altiero.

Over 200 undergraduates are working on research projects. Students are working alongside faculty and graduate students in the lab and are co-authoring papers that appear in leading scientific journals.

“Not only does this experience provide our students with invaluable training for careers in science and engineering,” says Altiero, “it also enables many of them to participate in programs that impact the community, such as the development of new products and participation in youth-oriented programs that generate excitement among the next generation of scientists and engineers.”



FIRST® LEGO® LEAGUE TEAM CELEBRATES.

AUSTIN NIJHUIS STUDYING RIVER SEDIMENTS.



NanoFex, LLC

A team of Tulane researchers led by Dr. Vijay John, professor of chemical and biomolecular engineering, has developed an affordable, effective method for remediating common yet extremely dangerous materials in groundwater. Tulane business and law students were recruited to write a business plan for NanoFex, LLC, which has patents pending on a technology to clean contaminated groundwater in a nontoxic, environmentally friendly way. NanoFex is currently in the proof of concept phase, partnering with manufacturers to supply the product on a large scale.



BOB LATHROP IN TANZANIA.

SafeSnip

Cutting the umbilical cord is the final step in a baby’s birth and it can expose the infant to severe infection if not done under sterile conditions. Tulane biomedical engineering students designed “SafeSnip”—a device to safely clamp, cut and disinfect the umbilical cord. The technology is patented and prototypes are now being tested. Licenses are pending.

Technology Transfer

The School of Science and Engineering marshals the full resources and disciplines of Tulane University to develop new technologies that impact health, energy and the environment. Tulane’s Office of Technology Transfer works with faculty and students to pursue patents on innovations developed in our facilities. This past year alone, this work resulted in 12 patent disclosures.





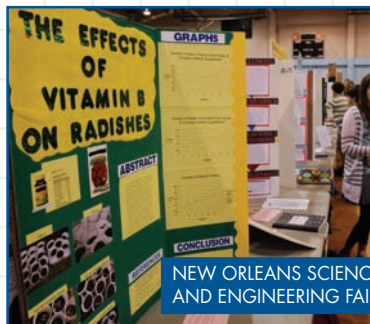
DR. WAYNE REED.



NEUROSCIENTISTS AT WORK: JUSTIN HOHENSTEIN AND SAI GADDE WITH PROF. BEN HALL.



WILLIAM KETHMAN AND STEPHANIE ROBERTS, INVENTORS OF THE SAFESNIP.



NEW ORLEANS SCIENCE AND ENGINEERING FAIR.

Generate excitement among the next generation of scientists and engineers



BIOMEDICAL INNOVATORS.

Automatic Continuous Online Monitoring of Polymerization Reactions

Polymerization reactions are difficult to monitor in real time, so characteristics and properties of polymers are rarely known until after the reaction is complete. Dr. Wayne Reed of the department of physics and engineering physics developed a technology that allows manufacturers to instantly measure the properties of polymeric reactions in real time, resulting in energy efficiencies and less waste. This environmentally friendly technology is being developed for widespread use in industrial settings.

Greater New Orleans Science and Engineering Fair

Science fairs introduce students to science at an early age. The Tulane School of Science and Engineering has assumed a leadership role in organizing and administering this annual event that involves both public and private schools from the Greater New Orleans area. The event is affiliated with the Intel International Science and Engineering Fair and directly or indirectly exposes thousands of elementary and secondary students to the many career paths that are available.

Tulane Science Scholars Program

Tulane Science Scholars Program (TSSP) is a selective program for students in grades 10–12 who have exceptional talent in the sciences, engineering and mathematics. Non-credit summer and Saturday academic year classes are offered by faculty members and graduate students who are passionate about sharing their subject area.

FIRST® Lego® League (FLL®) FIRST® Robotics Competition (FRC®)

Tulane Science and Engineering is a major partner in the local organization BLAST (Building Louisiana Science and Technology), which enables both the FLL and FRC to operate in the region. FLL offers an opportunity for middle school students (ages 9-14 in the U.S.) to design, build and compete with a robot constructed of LEGO®s and to create and deliver a research presentation on an annual theme. The regional FRC, officially known as "The FIRST® Bayou Regional," combines sports with science and technology for high school students. FRC teams, with an average of 25 students, raise funds and build and program robots to perform competitive missions.

K-12 Science, Technology, Engineering and Math (STEM) Education

“We are a catalyst for science and mathematics education in New Orleans. The School of Science and Engineering has proudly responded to the need of New Orleans area schools for more opportunities to engage young people in science. Our students have become role models for the youth of New Orleans, stimulating their interest in the sciences. At the same time, students reap the personal reward of empowering others.”

—Dean Nick Altiero