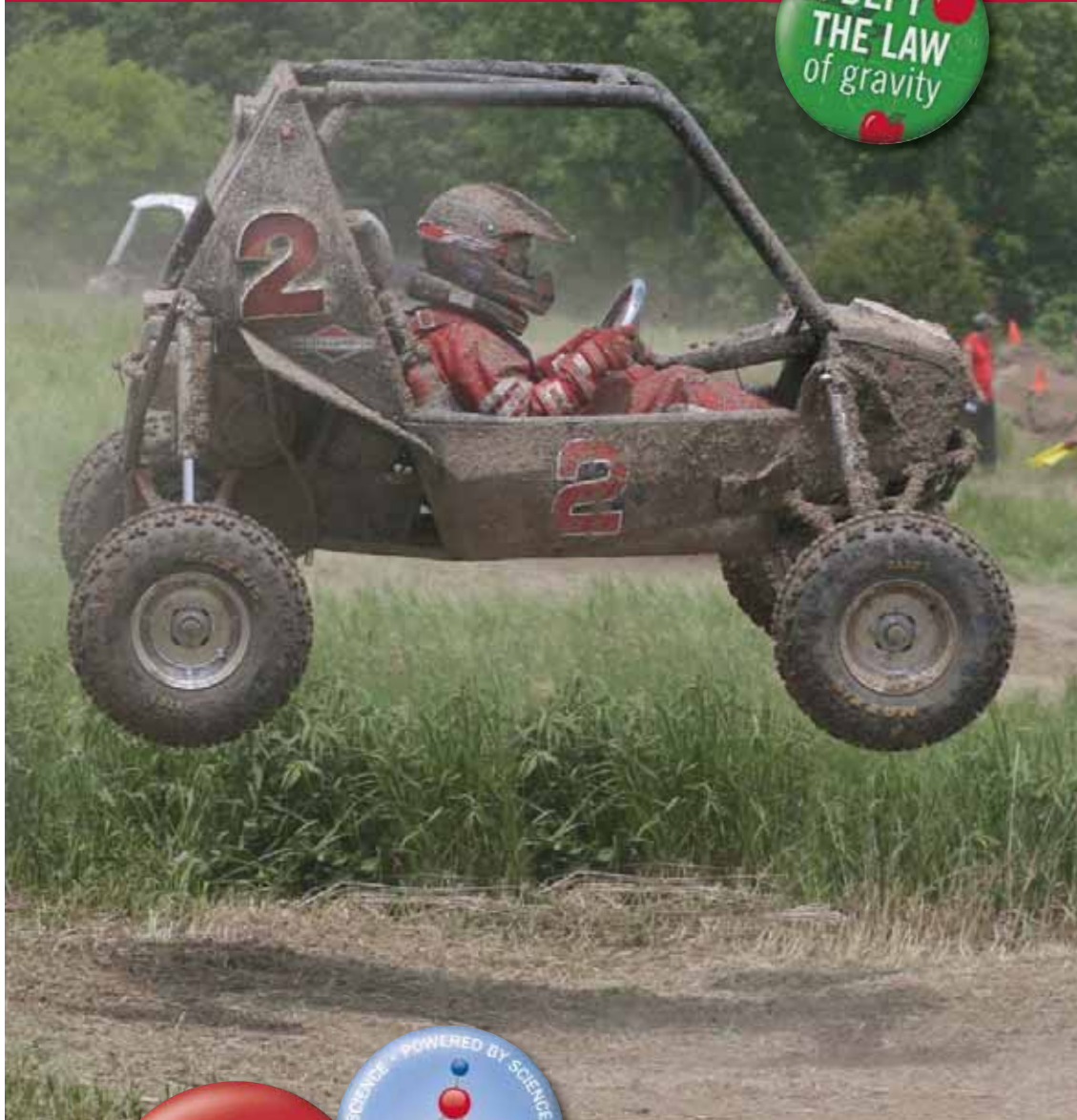


The Sciences at Stony Brook University



“Top-notch programs
in the hard sciences”
—*Fiske Guide to Colleges*



“One of only 9 public institutions
recognized for its undergraduate
research program”
—*U.S. News & World Report*



The Joy of Scientific Discovery

Whether your interests lie in the physical sciences, marine or atmospheric sciences, health sciences, planetary studies, engineering sciences, environmental studies, life sciences, or a host of other areas, you can explore them at Stony Brook University. We have the facilities, the opportunities, and most important of all—the people to help you make your own discoveries happen.

We are unique among research universities in that we have a top-rated, university-based teaching hospital, an award-winning undergraduate research program, and strong affiliations with nearby Brookhaven National Laboratory (BNL), whose state-of-the-art facilities span nanosciences to photon sciences to high-energy colliders. Check out our academic offerings—the broad range of focused and interdisciplinary sciences will stir your imagination.



Why Choose Stony Brook?

SCIENCE, SCIENCE, AND MORE SCIENCE We offer a wide variety of undergraduate programs—majors, minors, teacher preparation, and combined-degree programs—with applications in the real world.

HANDS-ON RESEARCH Outstanding opportunities exist at nearby Brookhaven National Lab and through our Undergraduate Research and Creative Activities (URECA) program.

PRIZE-WINNING PROFESSORS Our faculty have won the Nobel and Pulitzer Prizes, MacArthur Fellowship, Fields Medal in Mathematics, and National Medal of Science.

TOP-NOTCH FACILITIES Research facilities on campus include the Center of Excellence in Wireless and Information Technology and the Advanced Energy Research and Technology Center at our Research and Development Park, Stony Brook University Medical Center, and the Centers for Molecular Medicine and Biology Learning Laboratories.

AN INTERDISCIPLINARY ENVIRONMENT Concentrate in environmental chemistry, computer-human interaction, neuroscience, engineering geology, and other areas.

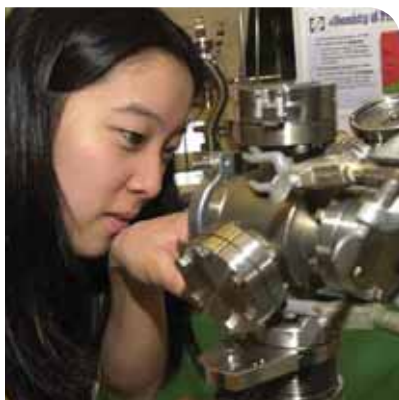
SMALL UNDERGRADUATE COMMUNITIES All freshmen belong to one of six close-knit communities featuring small first-year seminars and close connections to faculty.

AFFORDABLE EXCELLENCE Stony Brook is one of the 100 best values in public colleges, according to Kiplinger.

*London Times Higher Education World University Rankings *U.S. News & World Report

On the cover: SBU Motorsports team consistently ranks among the top finishers in Baja SAE (Society of Automotive Engineers) competitions across the country. Photo by Noah D. Machtay/Department of Mechanical Engineering

About Undergraduate Research at Stony Brook



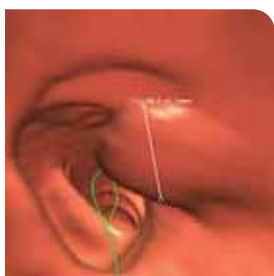
All Stony Brook undergraduates—including freshmen and transfer students—are eligible to participate in independent research through our award-winning Undergraduate Research and Creative Activities (URECA) program.

Through the program you will connect with a faculty mentor to do independent research in your area of interest. You'll engage in hands-on, discovery-based learning and contribute to the generation of new knowledge. In the spring, you, along with other student researchers, will

have an opportunity to showcase your project at a Celebration of Undergraduate Research and Creativity.

We are one of only nine public institutions recognized for our undergraduate research program under “Academic Programs to Look For,” by *U.S. News & World Report*. Programs URECA administers to support student research include the Battelle Summer Research Program, the Beckman Scholars Program, Research Experiences for Undergraduates (REU) Site Programs, Howard Hughes Medical Institute (HHMI) Undergraduate Research Programs, and the URECA Summer Research and Small Grant/Travel Grant Programs.

You can learn more about URECA and read interviews with our Researchers of the Month at www.stonybrook.edu/ureca



Discovered at Stony Brook

- *Homo floresiensis*, a hobbit-like 17,000-year-old hominid
- The MRI technology that won the Nobel Prize for Medicine
- Research and development of bar-code technology
- Pioneering use of ultrasound to accelerate healing of bone fractures
- The cause of Lyme disease
- A 10-pound ancient frog in Madagascar, possibly the largest ever to exist
- Patented diagnostic 3-D imaging software and a computer system for 3-D virtual colonoscopy
- Commingled thermoplastic spray paint made from old plastic bottles
- A new species of mouse lemur (*Microcebus mittermeieri*), the smallest primate in the world
- ReoPro®, used in cardiac angioplasties

Your Mentor and You

Stony Brook's outstanding research environment will support you in your scientific efforts from your first day here.

As an undergraduate on a research team with graduate students and faculty, you can expect to be treated as an equal. Faculty mentors can be found in nearly every field through our dedicated undergraduate research program.

The high level of mentored scientific scholarship at Stony Brook is evidenced by the fact that each year about 10 percent of the 300 semifinalists in the Intel Science Talent Search competition are mentored by Stony Brook faculty.



“Working in Dr. Thanos' lab at BNL turned me on to a whole different side of psychology that I had never investigated. I've learned how to be systematic and figure things out. Dr. Thanos really is the definition of a mentor for me.”

Andrew Tucci

MAJOR: Psychology

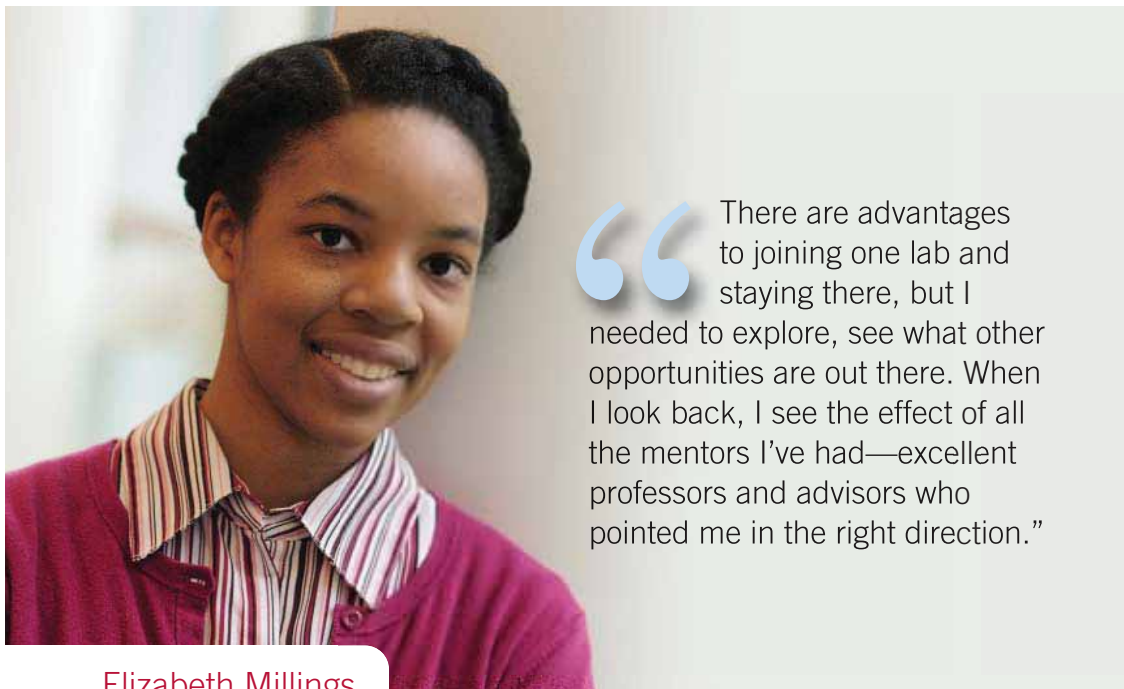
MENTOR: Panayotis (Peter) K. Thanos, Behavioral Pharmacology and Neuroimaging Lab, Brookhaven National Laboratory (BNL); faculty member in the Departments of Biomedical Engineering, Psychology, Neuroscience and Behavior, and Pharmacology.

RESEARCH ACTIVITY: Andrew is studying the effect of exercise on cocaine conditioned place preference in rats in the Behavioral Pharmacology and Neuroimaging Lab at Brookhaven National Laboratory.



“The most rewarding part of having undergraduates do research in my lab is bringing them to a conference and seeing them get really excited when they learn to present the findings to the scientific community. That experience is a culmination of a lot of hard work and a real boost to their confidence.”

—Peter K. Thanos



“ There are advantages to joining one lab and staying there, but I needed to explore, see what other opportunities are out there. When I look back, I see the effect of all the mentors I’ve had—excellent professors and advisors who pointed me in the right direction.”

Elizabeth Millings

MAJOR: Chemistry

MENTORS: Peter Tonge, Department of Chemistry; Jacob Hooker, Trevor Sears, Joanna Fowler, Brookhaven National Laboratory; Robert Tynebor, Merck Research Laboratories

RESEARCH ACTIVITY: Elizabeth has interned in the Gas-Phase Molecular Dynamics group of the Chemistry Department at Brookhaven National Lab; in the Radiotracer Chemistry group at BNL as a Science Undergraduate Laboratory Internship participant; and at Merck Research Laboratories, West Point, Pennsylvania, in the neuroscience program as an UNCF-Merck Scholar. Her research in the Tonge lab focuses on looking for ways to combat tuberculosis.



“ I really enjoy giving undergraduates the opportunity to work in my lab. Success in research requires students to be curious and inquisitive. Curiosity also provides the motivation to take them back into the lab when experiments don’t work as expected.”
—Peter Tonge

Programs of Note

WOMEN IN SCIENCE AND ENGINEERING (WISE) Supports women talented in science, mathematics, and engineering.

HONORS COLLEGE A special curriculum of interdisciplinary courses for high achievers that supplements their studies in any of our majors.

SCHOLARS FOR MEDICINE, SCHOLARS FOR DENTAL MEDICINE, AND ENGINEERING SCHOLARS FOR MEDICINE Eight-year combined undergraduate and medical/dental degree tracks within the Honors College, WISE, and the College of Engineering and Applied Sciences that guarantee entrance into the School of Medicine and the School of Dental Medicine.

HONORS PROGRAM IN COMPUTER SCIENCE Advanced courses in select topics and preferential admission to the joint BS/MS program in Computer Science.

“ I took a class in computational physics and started working with my professor on her major project—making a computational model of water. I came to Stony Brook wanting to do research, and sure enough I’m already doing research in my freshman year.”



Spencer Thomas

MAJOR: Physics

MENTOR: Marivi Fernandez-Serra, Department of Physics and Astronomy

RESEARCH ACTIVITY: Spencer is conducting independent research in physics to create a computational model of water.



“ With students, I start from the principle that nothing is impossible to understand and that everybody can do it. I find it so rewarding when I give them a hard assignment and they think they are not going to be able to do it. Then we come back and they surprise me with how well they’ve done it. That is worth it.”
—Marivi Fernandez-Serra



MERIT SCHOLARSHIPS All students admitted to WISE, the Honors College, Scholars for Medicine, Scholars for Dental Medicine, and Engineering Scholars for Medicine receive scholarship support for one to four years. All Intel Science Talent Search and National Merit Finalists and Semifinalists receive scholarship support ranging from partial tuition to full scholarship.

To learn more about these programs, visit www.stonybrook.edu/scholars

OTHER PROGRAMS Howard Hughes Medical Institute Undergraduate Research Fellowship Program; interdisciplinary research opportunities through The Center for Biotechnology; and unique study abroad research opportunities in locations such as Kenya, Madagascar, and Jamaica, West Indies.



About Brookhaven National Laboratory

A multipurpose research laboratory funded primarily by the U.S. Department of Energy, Brookhaven National Laboratory (BNL) is located on 5,300 acres less than 20 miles east of the Stony Brook campus. BNL operates large-scale facilities for studies in physics, chemistry, biology, medicine, applied science, and advanced technology.

Established in 1947, BNL is the home of seven Nobel Prize-winning discoveries—five for research in physics. Each year more than 5,000 visiting researchers from around the world join BNL's 3,000 scientists, engineers, and support staff. Stony Brook is BNL's largest single user, with more than 600 faculty, students, and staff participating in groundbreaking research at Brookhaven.

BNL scientists are expanding our understanding of the properties and function of matter from the microscopic to the cosmic scales. At the Relativistic Heavy Ion Collider (RHIC)—the world's newest and biggest particle accelerator for nuclear physics—scientists replicate conditions microseconds after the Big Bang to better understand subatomic particles and their interactions. At the Center for Functional Nanomaterials (CFN), scientists are probing the unique properties of matter at the nanoscale with the aim of developing new materials to help solve our nation's energy challenges. And at the National Synchrotron Light Source (NSLS), researchers are probing the inner workings of proteins, superconductors, and magnets in ways that may lead to a wide range of benefits for humankind.



Research Highlights at BNL

LIGHTING UP DISCOVERIES A source of intense beams of X-rays and ultraviolet light, the NSLS has been used to decipher the molecular structures of proteins and viruses, to construct micromachines, and to study magnetism and superconductivity. Work at the NSLS led to Nobel Prizes in 2003 and 2009.

LIQUID UNIVERSE RHIC's finding that the early universe behaves more like a liquid than a gas has enriched physicists' understanding of the theory that describes the interactions of the smallest known components of matter.

MEDICAL MARVELS Using positron emission tomography, scientists probe the brain chemistry of addiction, mental illness, and aging, and have been finding effective treatments for a variety of diseases.

ADVANCED COMPUTING BNL has designed and developed an award-winning supercomputer for analyzing large volumes of data and handling complex problems such as climate modeling. BNL is also home to Stony Brook's New York Blue, which was the world's fifth-fastest computer when it was purchased in 2007.

ENERGY ALTERNATIVES Through programs seeking advances in the use of renewable energy, BNL conducts research in biofuels, solar energy, nuclear energy, and energy efficiency and storage.

INVESTIGATING THE ULTRASMALL CFN provides researchers with state-of-the-art tools to fabricate and study nanomaterials, which could lead to new technologies.

GLOBAL CLIMATE CHANGE BNL scientists study the effects of aerosol particles, greenhouse gases, and other air pollutants on global climate, plant growth, and human health.

NUCLEAR SAFETY BNL's nuclear science experts participate in international efforts to safeguard nuclear materials, limit the spread of nuclear weapons, and improve the safety of nuclear reactors worldwide.

Learn more about the facilities and accomplishments of BNL at www.bnl.gov

BNL for Undergraduates

Brookhaven National Laboratory offers outstanding research opportunities for students in physics, material sciences, environmental studies, biology, chemistry, engineering, and other areas. BNL offers qualified students:

- research opportunities with the world's top scientists
- internships during the academic year and the summer
- shuttle service to BNL from the Stony Brook campus
- internships for students in the Women in Science and Engineering (WISE) program
- undergraduate scholarships through the Homeland Scholars and Fellows Program
- one-week mini-semesters during winter break

Learn more about BNL's undergraduate research opportunities at www.stonybrook.edu/bnl

The Sciences: Rigorous. Focused. Interdisciplinary.

SCIENCE MAJORS

APPLIED MATHEMATICS & STATISTICS, BS, BS/MS

ASTRONOMY/PLANETARY SCIENCES, BS*

ATHLETIC TRAINING, BS

ATMOSPHERIC & OCEANIC SCIENCES, BS

with tracks in: Atmosphere/Ocean; Meteorology

BIOCHEMISTRY, BS*

BIOLOGY, BS*

with specializations in: Developmental Genetics; Ecology & Evolution; Biomedical Engineering; Environmental Biology; General Biology; Neuroscience

BIOMEDICAL ENGINEERING, BE
with specializations in: Bioelectricity and Biomaging; Biomechanics and Biomaterials; Molecular & Cellular Biomedical Engineering

CHEMICAL & MOLECULAR ENGINEERING, BE

with specializations in: Pharmacology; Materials Science; Polymer Science; Tissue Engineering; Business; Chemistry; Physics

CHEMISTRY, BS, BA*

with options in: Biological Chemistry; Chemical Physics; Chemical Science; Environmental Chemistry; Marine & Atmospheric Chemistry

CLINICAL LABORATORY SCIENCES, BS

COASTAL ENVIRONMENTAL STUDIES, BS

COMPUTER ENGINEERING, BE

COMPUTER SCIENCE, BS*

with specializations in: Computer-Human Interaction; Information Assurance; Game Programming

EARTH & SPACE SCIENCES, BA

with concentrations in: Astronomy; Atmospheric Sciences; Biology; Chemistry; Geology; Marine Sciences; Mathematics; Physics

ECOSYSTEMS & HUMAN IMPACT, BA

ELECTRICAL ENGINEERING, BE

with specializations in: General Electrical Engineering; Microelectronics; and Telecommunications

ENGINEERING CHEMISTRY, BS

ENGINEERING SCIENCE, BE

with specializations in: Biomedical Engineering; Civil & Environmental Engineering; Electrical Engineering; Materials Science & Engineering; Mechanical & Manufacturing Engineering; Nanoscale Engineering; Engineering Management

ENVIRONMENTAL DESIGN, POLICY, & PLANNING, BA

ENVIRONMENTAL STUDIES, BA*

with concentrations in: Archaeology;

Atmospheric Studies; Conservation/Physical Anthropology; Ecology; Environmental Economics; Environmental History; Environmental Law; Marine Environmental Studies; Public Policy; Waste Reduction & Management

GEOLOGY, BS*

with clusters in: Environmental Geoscience; Geological Oceanography; Geology

HEALTH SCIENCE, BS

with concentrations in: Health Care Management; Community Health Education; Public Health; Health Care Informatics; Environmental Health; Medical Billing & Coding; Pharmacy Technician; Medical Dosimetry; Anesthesiology Technology; Disability Studies; Emergency and Disaster Management; EMT-Paramedic; Nuclear Technology

INFORMATION SYSTEMS, BS

with specializations in: Natural Science; Engineering; Applied Science; Environmental Studies

MARINE SCIENCES, BS*

MARINE VERTEBRATE BIOLOGY, BS

MATHEMATICS, BS*

MECHANICAL ENGINEERING, BE

NURSING, BS

PHARMACOLOGY, BS*

PHYSICS, BS*

PSYCHOLOGY, BS*

RESPIRATORY CARE, BS

SUSTAINABILITY STUDIES, BA

TECHNOLOGICAL SYSTEMS MANAGEMENT, BS

with specializations in: Natural Science; Engineering; Applied Science; Environmental Studies

SCIENCE MINORS

ADAPTED AQUATICS

APPLIED MATHEMATICS & STATISTICS

ASTRONOMY/PLANETARY SCIENCES

BIOENGINEERING

BIOLOGY

BIOMATERIALS

CHEMISTRY

COMPUTER SCIENCE

ECOSYSTEMS & HUMAN IMPACT

ELECTRICAL ENGINEERING

ELECTRONIC, OPTICAL & MAGNETIC MATERIALS

ENGINEERING & TECHNOLOGY

ENTREPRENEURSHIP

ENVIRONMENTAL DESIGN, POLICY, & PLANNING

ENVIRONMENTAL ENGINEERING

ENVIRONMENTAL STUDIES

GEOLOGY

HEALTH & WELLNESS

INFORMATION SYSTEMS

MANUFACTURING ENGINEERING

MARINE SCIENCES

MATERIALS SCIENCE

MATHEMATICS

MECHANICAL ENGINEERING

NANOTECHNOLOGY STUDIES

OPTICS

PHYSICAL METALLURGY

PHYSICS

SCIENCE & ENGINEERING

TECHNICAL LEADERSHIP

TECHNOLOGICAL SYSTEMS

MANAGEMENT

SECONDARY TEACHER EDUCATION PROGRAMS IN THE SCIENCES

BIOLOGY

CHEMISTRY

EARTH SCIENCE

MATHEMATICS

PHYSICS

SEQUENTIAL AND COMBINED BACHELOR'S/MASTER'S DEGREE PROGRAMS IN THE SCIENCES

APPLIED MATHEMATICS & STATISTICS, BS/MS; BS/MPH

BIOCHEMISTRY, BS/CHEMISTRY, MS

BIOMEDICAL ENGINEERING, BE/MS

BUSINESS BS/MBA, BA/MBA, BE/MBA

CHEMISTRY, BS/MS; BS/MAT

COMPUTER ENGINEERING, BE/MS; BE/ELECTRICAL ENGINEERING, MS

COMPUTER SCIENCE, BS/MS

EARTH SCIENCE, BA/MAT

EARTH & SPACE SCIENCES, BA/MPH

ELECTRICAL ENGINEERING, BE/MS; BE/COMPUTER ENGINEERING, MS

ENGINEERING CHEMISTRY, BS/CHEMISTRY, MS; BS/MATERIALS SCIENCE, MS

ENGINEERING SCIENCE, BE/MATERIALS SCIENCE, MS

HEALTH SCIENCE, BS/OCCUPATIONAL THERAPY, MS

MECHANICAL ENGINEERING, BE/MS

PHARMACOLOGY, BS/MPH

PHYSICS, BS/MATERIALS SCIENCE, MS; BS/MAT

*** Majors offering Honors Programs**



Location

We are located on the North Shore of Long Island in southeastern New York, approximately 60 miles east of New York City and only 20 miles from Brookhaven National Laboratory. With a Long Island Rail Road station on campus, traveling to New York City and JFK Airport is easy. Come visit us for a campus tour.

For more information

Contact us at:

Office of Undergraduate Admissions
Stony Brook University
118 Administration Building
Stony Brook, NY 11794-1901

(631) 632-6868

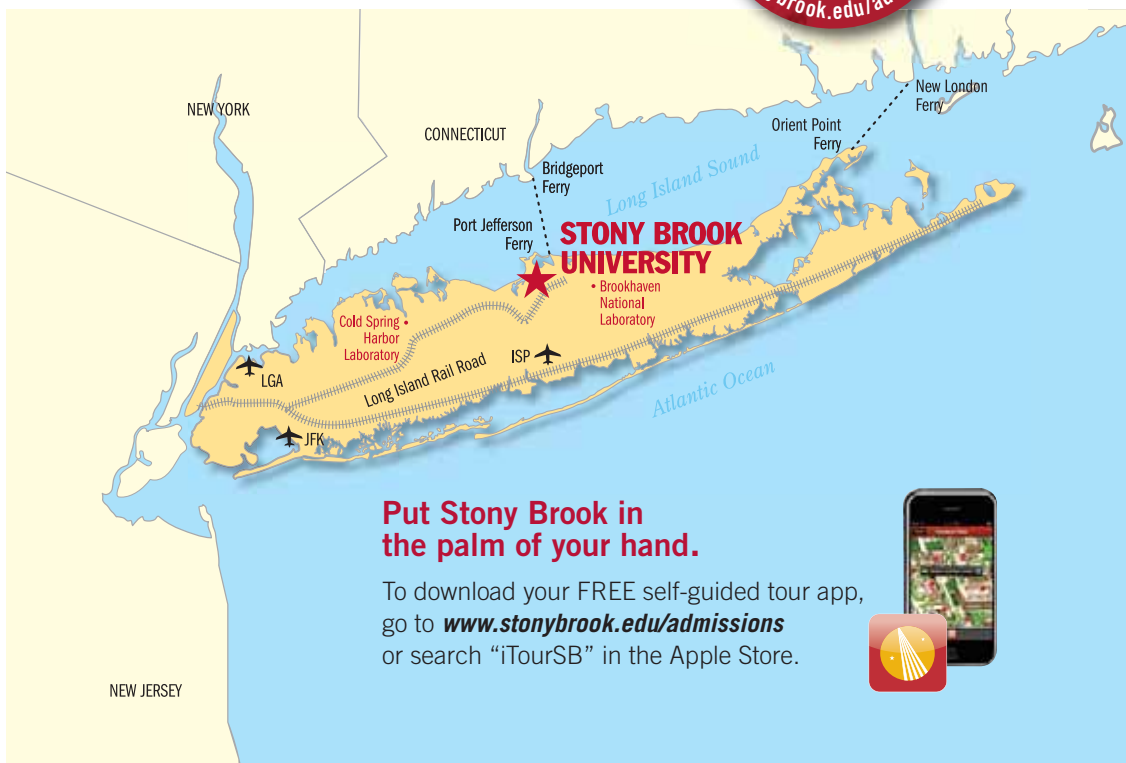
E-mail: enroll@stonybrook.edu

Apply online at www.stonybrook.edu/admissions

Application deadline: **January 15**

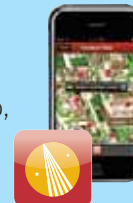
Notification by: **April 1**

Stony Brook University/SUNY is an affirmative action, equal opportunity educator and employer. 10070055



Put Stony Brook in the palm of your hand.

To download your FREE self-guided tour app, go to www.stonybrook.edu/admissions or search "iTourSB" in the Apple Store.





“ Eighth among public institutions placing graduates in elite graduate programs in medicine, law, and business”
 —Wall Street Journal



“ Among the 50 best public universities”
 —U.S. News & World Report



Admissions Office
 118 Administration Building
 Stony Brook, NY 11794-1901

Nonprofit
 U.S. Postage
PAID
 Stony Brook
 University