UNIVERSITY of **HOUSTON**

COLLEGE OF
NATURAL SCIENCES AND MATHEMATICS

Advancing Science. Impacting Life.

MISSION

The College of Natural Sciences and Mathematics is committed to the success of our students, the pursuit of knowledge through fundamental and applied research, and continued engagement in community and professional service. The College is dedicated to cultivating an environment of intellectual growth and serving as a leader in innovative research.

DEAN

Dan E. Wells, Ph.D.

ACADEMIC DEPARTMENTS

Biology & Biochemistry
Computer Science
Mathematics

Chemistry
Earth & Atmospheric Sciences
Physics

CORE VALUES

- Dedication to student success through academic excellence
- Outstanding teaching informed by research
- Innovative science and education with global impact
- Dynamic environment that fosters academic freedom and growth
- Diverse community of faculty, staff and students

OUR FACULTY

Tenured or Tenure Track: **203**

OUR STUDENTS

Undergraduate Majors: **4,823**
Graduate Students: **933**
Post-Baccalaureate Students: **245**

DEGREES AWARDED

Bachelor's: **985**   Master's: **179**   Doctoral: **100**

DEMOGRAPHICS

Female: **44%**   Male: **56%**
African-American: **6%**   Asian-American: **33%**
Hispanic: **24%**   International: **13%**
White: **19%**   Other: **5%**

RECENT STUDENT AWARDS

Fulbright English Teaching Assistant Grant:
  Brendon Hillebrand (2019); Khalid Sheikh (2018)
Goldwater Scholarships:
  Debora Mroczek & Brian Vu (2019)
NSF Graduate Research Fellowships:
  Debora Mroczek & Brian Vu (2020); Jose Daniel Velazco-Garcia, Stephanie Suarez & Erin Miller (2019); Breyinn Loftin (2018); Anthony Keyes & Khanh Nguyen (2017)
Udall Scholarship:
  True Furrh (2019)

RESEARCH EXPENDITURES

$31 Million (Grants & Contracts)

RECENT FACULTY AWARDS

American Association for the Advancement of Science Fellows:
  Olafs Daugulis, Shiv Halasyamani & Allan Jacobson (2018)
American Geophysical Union Fellow:
  John Suppe (2019)
American Mathematical Society Fellow:
  Min Ru (2018)
Association for Computing Machinery, Distinguished Member:
  Albert Cheng (2020)
Geological Society of America Fellow:
  Julia Wellner (2020); Thomas Lapen (2018)
Humboldt Research Award:
  Zhifeng Ren (2018)
Humboldt Research Fellowship:
  Ognjen Miljanic (2018)
National Academy of Inventors:
  Seamus Curran (2019)
NSF CAREER Awards:
  Jakoah Brgoch, Richard Meisel, Thomas Teets & Jonny Wu (2019); Loi Do & Judy Wu (2018)
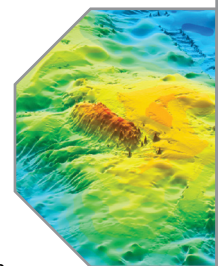**Royal Society of Chemistry Fellow:**
  Ognjen Miljanic (2019)
Alfred P. Sloan Research Fellows:
  Jakoah Brgoch & Judy Wu (2020)
Society of Exploration Geophysicists Maurice Ewing Medal:
  Leon Thomsen (2020)
W. T. & Idalia Reid Prize, SIAM:
  Roland Glowinski (2020)
UH Teaching Excellence Awards:
  74 faculty recipients (2010–2020)

INNOVATIVE UNDERGRADUATE PROGRAMS

Research Opportunities for Students

NSM offers a wide range of research opportunities for undergraduates at all levels. NSM students conduct research all over campus, as well as at the Texas Medical Center, the UH Coastal Center, and in industry labs. From programming computers, to pure and applied mathematics, to extended field work, wet lab experiments, and even marine research in the Galápagos Islands, NSM students gain valuable experiences that prepare them for medical school, graduate school, and their careers. Many NSM students spend multiple years working with a faculty mentor. NSM and the University offer competitive scholarships to support student researchers.

Increasing Student Success in Entry-Level Math and Sciences Classes

With the goal of increasing student success in STEM courses, NSM faculty implemented a comprehensive redesign of introductory chemistry, biology, physics, and mathematics courses. The efforts are changing the way the material is presented and increasing the amount of hands-on learning in the classroom. Students also have access to peer-led learning sessions designed to reinforce difficult topics and improve study skills. The initiative was funded with an initial $1.5 million grant from the Howard Hughes Medical Institute.

Scholar Enrichment Program (SEP)

This program focuses on improving the academic experience and performance of NSM students. Through peer-to-peer workshops that improve learning and problem-solving skills, SEP helps nearly 1,500 students each year succeed in basic science and math courses. SEP also has tutoring programs and funding to assist students with paying for school. SEP also offers the TC Energy Summer Scholars Academy annually. The program prepares high school students for their first semester of college and beyond.

*teach*HOUSTON

A partnership between NSM and the College of Education, *teach*HOUSTON is changing the way future secondary math and science teachers are trained. Students participate in classroom teaching throughout their four years at UH with rotations at local elementary, middle, and high schools. They learn valuable teaching skills from mentor teachers at public schools and master teachers at UH. Ninety percent of the graduates continue as public school teachers beyond two years.

RECENT SIGNIFICANT GRANTS

"Development of Spectral Phase Contrast Micro-CT"
 Investigator: **Mini Das, Ph.D.**
 Funding: **$3.1 Million from the National Institute of Biomedical Imaging**

"Selected Problems in Relativistic Heavy Ion Physics in Alice at the LHC"
 Investigator: **Rene Bellwied, Ph.D.**
 Funding: **$2.3 Million from the U.S. Department of Energy**

"Clonal Reconstruction and Targeting of the Correa Sequence"
 Investigator: **Frank McKeon, Ph.D.**
 Funding: **$2.3 Million from the National Cancer Institute**

"Computational Explorations of Unconventional Approaches to Control Noncovalent Interactions"
 Investigator: **Judy Wu, Ph.D.**
 Funding: **$1.9 Million from the National Institute of General Medical Sciences**

"Elucidating Molecular-Level Roles of Essential Metals in Gut Bacteria with New Fluorescent Protein-Based Metal Ion Sensors"
 Investigator: **Melissa Zastrow, Ph.D.**
 Funding: **$1.9 Million from the National Institute of General Medical Sciences**