# NSM FACT SHEET 2024

## 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

## OUR FACULTY

Tenured or Tenure Track: **200**

## OUR STUDENTS

Undergraduate Students: **4,935**
Post-Baccalaureate Students: **161**

Graduate Students: **936**

## DEGREES AWARDED

Bachelor's: **982**   Master's: **209**   Doctoral: **95**

## RESEARCH EXPENDITURES

$31 Million (Grants & Contracts)

## CORE VALUES

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

## DEMOGRAPHICS

African-American: **8%**
Hispanic: **24%**
White: **17%**

Asian-American: **33%**
International: **14%**
Other: **4%**

## RECENT STUDENT AWARDS

**Department of Defense SMART Scholarship:**
 Ozzy Tirmizi (2022)

**Department of Energy Graduate Student Research Award:**
 Caleb Broodo (2024); Anthony Wood (2023)

**Fulbright English Teaching Assistant Grants:**
 Alyson Vu (2023); Hai Pham, Phillip Pham, Urvi Sakhuja (2022); Ashley Cruz, Ana Gutiérrez, Olivia Lee, Shailee Modi (2021)

**Fulbright Study/Research Grants:**
 Javier Padron, Leonard Wang (2024); Anushka Oak, Amanda Pascali (2022); Carl Suerte (2021); Fernando Flor (2020)

**Goldwater Scholarships:**
 Gabrielle Kostecki (2023); Gabrielle Olinger (2021)

**NSF Graduate Research Fellowships:**
 Galina Aglyamova (2024); Damon Spencer (2023); Jakob Joachin (2022); True Furrh, Alejandro Ramirez, Laura Taylor (2021); Debora Mroczek, Brian Vu (2020); Jose Daniel Velazco-Garcia, Stephanie Suarez, Erin Miller (2019)

## RECENT FACULTY AWARDS

**American Association for the Advancement of Science Fellow:**
 Eric Bittner (2023)

**American Chemical Society Fellow:**
 Eva Harth (2021)

**American Physical Society Fellow:**
 Claudia Ratti (2021)

**American Statistical Association Fellow:**
 Mikyoung Jun (2021)

**DOE Early Career Award:**
 Youtong Zheng (2023)

**Edward A. Bouchet Award, American Physical Society:**
 Carlos Ordonez (2022)

**Grover E. Murray Memorial Distinguished Educator Award, American Association of Petroleum Geologists:**
 Jinny Sisson (2023)

**IEEE Fellows:**
 Gopal Pandurangan, Ioannis Pavlidis (2024)

**J. Clarence Karcher Award, Society of Exploration Geophysicists:**
 Jiajia Sun (2021)

**Materials Research Society Fellow:**
 Zhifeng Ren (2023)

**National Academy of Engineering:**
 Leon Thomsen (2022)

**National Academy of Inventors:**
 **Fellows:** Alex Ignatiev (2021); Seamus Curran (2019)
 **Senior Members:** James Briggs, Shishir Shah (2023); James Flynn (2022)

**NSF CAREER Awards:**
 Robert Comito (2024); Tai-Yen Chen, Mehmet Şen, Melissa Zastrow (2023); Andreas Mang, Panruo Wu (2022); Pavan Hosur (2021)

**Piper Professor:**
 Nouhad Rizk (2022)

**Royal Society of Chemistry Fellows:**
 Jakoah Brgoch (2024); Shiv Halasyamani (2023)

**SPIE Fellow:**
 Mini Das (2022)

**UH Teaching Excellence Awards:**
 98 faculty recipients (2010–2024)

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# 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 & 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 more than 1,800 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. In 2022, the program received national and state recognition. INSIGHT into Diversity Magazine's Inspiring Programs in STEM Award recognized SEP's work to improve diversity, equity and inclusion in STEM careers. SEP received the Texas Higher Education Coordinating Board's Star Award for its contributions to providing postsecondary credentials of value, specifically through its efforts to provide exemplary support service to students.

## *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. In 2023, *teach*HOUSTON received INSIGHT into Diversity Magazine's Inspiring Programs in STEM Award for its efforts to mentor and train a new generation of students to enter STEM teaching careers.

## RECENT SIGNIFICANT GRANTS

**"Common Stem Cell of Origin for Junctional and Gastric Adenocarcinoma"**
**Investigator:** Frank McKeon, Ph.D.
**Funding:** $4.7 Million from the National Cancer Institute

**"DarkSide-20K-Urania Project"**
**Investigator:** Andrew Renshaw, Ph.D.
**Funding:** $2.9 Million from the National Science Foundation

**"Proinflammatory Lung Epithelial Variants in Cystic Fibrosis"**
**Investigator:** Frank McKeon, Ph.D.
**Funding:** $2.7 Million from the National Heart, Lung, and Blood Institute

**"Actively Engaging NK Cells during Virotherapy to Induce Neoantigen-Specific Antitumor Immunity"**
**Investigator:** Shaun Zhang, M.D., Ph.D.
**Funding:** $1.9 Million from the National Cancer Institute

**"Targeting Constitutively Active Sumo Modified Androgen Receptors in Endocrine Therapy Resistant Breast Cancer"**
**Investigator:** Tasneem Bawa-Khalfe, Ph.D.
**Funding:** $1.8 Million from the National Cancer Institute

**"Mentoring, Development, and Engagement of Diverse STEM Students at a Large, Public, Urban University"**
**Investigator:** Daniel Hauptvogel, Ph.D.
**Funding:** $1.5 Million from the National Science Foundation

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