



Research
TRAILBLAZER

ADVANCING RESEARCH. AMPLIFYING IMPACT.

ETSU Research Strategic Plan





RESEARCH VISION

ETSU is recognized, through funding, rankings, and impact, as one of the premier regional public research universities in the nation.



EXPLORE THE ETSU RESEARCH STRATEGIC PLAN

Scan the QR code or go to etsu.edu/research

Mapping the Next Five Years



At East Tennessee State University, research is a commitment to discovery, innovation, service, and meaningful impact across Appalachia and beyond. It is

a commitment because research is integral to fulfilling our mission of improving the quality of life for the people of our region. Over the past decade, ETSU's research enterprise has grown through collaboration among faculty, students, and community partners who are addressing real-world challenges. While we have made significant progress, there is more work to be done and impact to be realized. I am therefore pleased to share ETSU's five-year research strategic plan in this document.

Our new vision is that ETSU is recognized, through funding, rankings, and impact, as one of the premier regional public research universities in the nation. The vision statement is aspirational, achievable, and exciting.

This publication highlights ETSU's momentum — showcasing some of the people, partnerships, and ideas driving ETSU's emergence as a leading regional public research university. The stories featured throughout this report reflect

the university's five areas of research emphasis identified in the research strategic plan:

- Applied Technology and Engineering
- Biomedical Sciences and Clinical Translation
- Environmental Systems, Hazards, and the Outdoors
- Rural Health and Appalachian Thriving
- The Science of Education and Engagement

Together, these areas represent ETSU's commitment to conducting research that advances knowledge and leads to missional impact.

Each story reflects the ETSU Trailblazer spirit: curiosity applied to action and discovery translated into impact. Inspired by our proximity to the Appalachian Trail, the Trailblazer identity represents exploration, resilience, and the pursuit of new paths in research, innovation, and community impact.

We look forward to achieving our research vision and invite you to join us as we blaze new trails.

Dr. Nick Hagemeier

Vice Provost for Research and Chief Research Officer

A DECADE OF RESEARCH GROWTH

Impact

• **500%+**

growth in research activity
in the past decade

Funding

• **\$65-70M**

in annual sponsored awards

Rankings

• **TOP 10%**

nationally among regional
public institutions

Applied Technology and Engineering

ETSU researchers and students leverage applied sciences, engineering, AI, and data-driven innovation to solve pressing challenges and strengthen workforce and industry development across the region.

ETSU iGEM Team Shines in Paris

ETSU's first iGEM team gained international recognition at the Paris-based synthetic biology competition for research addressing global "hidden hunger" through vitamin-enhanced soybean seeds. The project built on research by Dr. Tianhu Sun and was supported by faculty mentors including Dr. Bob Standaert and Dr. Aruna Kilaru. Funding and institutional support from the ETSU Research Corporation helped make the team's participation and success possible.



**FOLLOW THEIR
JOURNEY TO PARIS.**



● In 2026, two ETSU students, Trent Lewis and Raina Desai, earned the prestigious Goldwater Scholarship, one of the nation's highest honors for undergraduates pursuing careers in science, engineering, and mathematics research.

● At ETSU, students gain hands-on research experience and faculty support that help them compete and succeed on a national stage.



Biomedical Sciences and Clinical Translation

ETSU advances biomedical discovery and clinical innovation that improves health outcomes across rural and underserved communities. By connecting research with practice, ETSU will accelerate the future of healthcare throughout Appalachia.

Unraveling the Science of Recovery

At ETSU's Quillen College of Medicine, Dr. Justin Gass studies how alcohol alters brain circuits involved in memory, stress, and decision-making. His work seeks to better understand addiction and recovery while creating hands-on research opportunities for students. He is also leading efforts to establish a new Center for Neuroscience at ETSU while mentoring the next generation of researchers and health professionals.



WHY IS RECOVERY SO DIFFICULT?

Read how Gass' research is working to answer that question.



Clinical Excellence

With five health sciences colleges, ETSU has the largest Academic Health Sciences Center in Tennessee. ETSU Health has more than 300 healthcare providers across more than 40 specialties at 50 medical facilities across the region.

Environmental Systems, Hazards, and the Outdoors

As a living laboratory for environmental systems, ecological, weather, outdoor recreation, and natural hazard research, ETSU improves hazard preparedness and resilience, advances environmental stewardship, strengthens sustainable tourism and outdoor recreation, and positions the university as a leader in applied outdoor and environmental research.

Where Climate Data Meets Disaster Preparedness

ETSU is home to Tennessee's official climate office, which plays a national role in addressing extreme weather. It is one of nine National Oceanic and Atmospheric Administration (NOAA) pilot sites that help communities use climate data and resources to address long-term vulnerabilities to extreme weather.



EXPLORE ETSU'S EXTREME WEATHER RESEARCH.

Leading the Way

In 2026, ETSU launched a new Master of Science in Environment, Health, and Disaster Sciences – the **first of its kind** in Tennessee.





Rural Health and Appalachian Thriving

ETSU advances place-based, interdisciplinary research and solutions that integrate health, social, cultural, and community systems to improve the health, well-being, and vitality of rural and Appalachian regions.

From Data to Impact: Strengthening Communities

The ETSU Center for Rural Health and Research has developed the Tennessee Livability Dashboard, a statewide resource that brings together more than 60 indicators related to health, housing, education, transportation, employment, and other factors that shape quality of life. Created in partnership with the Tennessee Livability Collaborative, the dashboard reflects ETSU's leadership in rural health research and its commitment to helping communities use data to improve health outcomes and strengthen local well-being.



EXPLORE THE DASHBOARD.

Our Impact

ETSU is home to research centers dedicated to improving health and well-being in Appalachia, addressing some of the region's most pressing challenges.

These centers focus on areas such as addiction science, rural health, women's health, advancing research, and evidence-based solutions that enhance quality of life across the region.

The Science of Education and Engagement

ETSU advances our understanding of how people learn, engage, and succeed across the lifespan with a particular emphasis on rural-serving regions, integrating teaching and learning science, digital environments, implementation science, and workforce and community engagement.

Improving Rural Math Outcomes

Dr. Jingyuan Zhang, an Assistant Professor in ETSU's Clemmer College of Education and Human Development, is researching how rural schools can successfully implement evidence-based mathematics practices. Drawing on implementation science and partnerships with local schools, Zhang studies the factors that support or hinder effective math instruction. Her work aims to help educators sustain proven practices, strengthen student achievement, and improve mathematics outcomes in rural communities and beyond.



**READ ABOUT
DR. JINGYUAN
ZHANG'S RESEARCH.**



A Culture of Engagement

ETSU is one of fewer than 300 institutions nationwide to earn the Carnegie Foundation's Community Engagement Classification, recognizing its commitment to hands-on, community-engaged learning that connects students with real-world partners, strengthens Appalachia, and drives student success.



Why Partner with ETSU?

Research Powered by Partnership

The strongest research happens when universities and communities work together. ETSU collaborates with healthcare systems, school districts, industries, nonprofits, and community organizations to address regional challenges through research and innovation.



In partnership with the state, ETSU is strengthening its research partnerships and commercialization efforts by appointing Dr. Katie Houston as Director of Commercialization to help translate faculty discoveries into industry collaborations,

startups, and real-world technologies. Through the ETSU Research Corporation — the university's economic development, technology transfer, and commercialization arm — ETSU is expanding pathways that connect researchers, industry partners, and entrepreneurs to bring innovation from the lab to the marketplace.



LEARN MORE.



Deep regional **expertise**



Applied research **capacity**



Clinical and community **access**



Workforce development **alignment**



Collaborative **culture**



PARTNER WITH US.

Become a Trailblazer

Research With Purpose.
Opportunities With Impact.

At ETSU, students don't have to wait until graduate school to make an impact through research. ETSU offers undergraduate and graduate students hands-on opportunities to work alongside faculty on projects that improve health, advance technology, strengthen communities, and solve real-world challenges across Appalachia and beyond.

While this report highlights five areas of emphasis, they represent only a portion of the opportunities available at ETSU. Across disciplines ranging from the arts and humanities to community-engaged learning, research, and professional practice, you can pursue meaningful experiences aligned with your own passions and goals. Whatever your interests, you will find opportunities to explore, create, discover, and make an impact.



BECOME A TRAILBLAZER.

Credits

President: Dr. Brian Noland

Provost and Senior Vice President for Academic Affairs: Dr. Kimberly D. McCorkle

Vice Provost for Research and Chief Research Officer: Dr. Nick Hagemeyer

Research Strategic Plan Work Group Co-Chairs:

Dr. Pamela Mims

Dr. Saurabh Mehta

Research Strategic Plan Task Force Members:

Dr. Amber Arsenault, College of Nursing

Dr. Biju Bajracharya, College of Business and Technology

Dr. Joe Bidwell, College of Arts and Sciences

Dr. Debbie Byrd, Gatton College of Pharmacy

Dr. Quincy Byrdsong, Ballad Health

Dr. Karen Carver, College of Nursing

Mr. Anthony Cuzzo, Graduate Student, Quillen College of Medicine

Ms. Wendy Eckert, Office of Research and Sponsored Programs Administration

Dr. Cerrone Foster, Office of Undergraduate Research and Creative Activities

Dr. Daniel Gahreman, College of Health Sciences

Dr. Paul Garton, Clemmer College of Education and Human Development

Dr. Justin Gass, Quillen College of Medicine

Dr. Meredith Ginley, College of Arts and Sciences

Dr. Nick Hagemeyer, Office of the Vice Provost for Research

Dr. Amal Khoury, College of Public Health

Dr. Stephen Marshall, ETSU Research Corporation

Dr. Brian Maxson, College of Arts and Sciences

Dr. Saurabh Mehta, College of Health Sciences

Mr. Michael Meit, College of Public Health

Dr. Pamela Mims, Clemmer College of Education and Human Development

Dr. Jonathan Moorman, Quillen College of Medicine

Ms. Jacy Richardson, College of Business and Technology

Ms. Ashley Sergiadis, Sherrod Library

Ms. Shawnee Shuler, Division of Business and Finance

Mr. Jonathon Taylor, College of Arts and Sciences



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