



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

OFFICE OF COMMUNITY ENGAGEMENT & OUTREACH

PARTNERSHIPS THAT MAKE A DIFFERENCE

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A Note from the Associate Vice Chancellor



The year 2020 was an unprecedented moment in time as we navigated two global pandemics—COVID-19 and social injustice—through the courage to care, the courage to think big, and the courage to lead. This edition of *Partnerships That Make a Difference* demonstrates the university's steadfast mission to move forward the frontiers of human knowledge and to enrich and elevate the citizens of the state of Tennessee, the nation, and the world.

While it was safer for us to be apart through much of the year, the pandemics have caused the university to reimagine how we engage with the broader community in the 21st century, and I am excited to say that we are more connected than ever before.

As we spotlight some of the university's exemplary programs and initiatives, we look forward to new and continued collaboration with diverse audiences as we explore solutions for some of our most pervasive grand challenges.

All my best,

A stylized, handwritten signature in black ink, consisting of a large 'J' and 'S' intertwined.

Javiette Samuel
Associate Vice Chancellor for Diversity and Engagement

A photograph of three students on a grassy hill. On the left, a young man in an orange t-shirt and blue jeans sits on a concrete ledge, wearing a light blue face mask. In the center, a young woman in a black t-shirt and denim shorts stands, wearing a green patterned face mask. On the right, a young woman in a white t-shirt and blue shorts stands with her arms crossed, wearing a light blue face mask and carrying a red backpack. In the background, there is a large brick building with a clock tower and a blue sky with white clouds.

CONTENTS

- 4 Advancing Access, Diversity, Equity, and Inclusion
- 6 COVID-19 Outreach
- 10 Civic Engagement and Public Policy
- 12 Science, Technology, Engineering, the Arts, and Mathematics
- 14 Health and Wellness
- 16 Business and Economic Development
- 17 Global Engagement
- 18 Funding for Broader Impact

ADVANCING ACCESS, DIVERSITY, EQUITY, AND INCLUSION

Flagship Scholarship Expands to Eight New Tennessee High Schools

The Flagship Scholarship, one of three programs offered by UT to increase access and affordability for Tennessee residents, was expanded to students at 38 high schools across the state in October. When combined with other federal, state, and institutional

aid, the Flagship Scholarship covers tuition and mandatory fees for up to eight semesters. New schools with students eligible for the Flagship Scholarship are Central High School in Knoxville; Cane Ridge High School, Kenwood High School, Northeast High School, and West Creek High School in

Middle Tennessee; and Overton High School, Southwind High School, and Whitehaven High School in Memphis.

Division of Diversity and Engagement Coordinates Back-to-School Drives

The Division of Diversity and Engagement coordinated a campus-wide effort to participate in two local initiatives: Shoes for School, hosted by the Knoxville Area Urban League, and Knox County Mayor Glenn Jacobs's School Mania, which annually draws more than 1,000 people. Shoes for School collected more than 1,500 pairs of new shoes and 3,000 backpacks full of supplies for local students.

Step Up Partnership Creates Space and Opportunities for Young Women

OCEO's Imagine Tennessee program, which fosters community-university partnerships in key areas, launched a collaboration with Step Up to connect young women on campus and in the community with opportunities to learn from national speakers in a variety of fields. Step Up propels girls living or going to school in underresourced communities to fulfill their potential by empowering them to become confident, college bound, career focused, and ready to join the next generation of professional women.

Teacher Education Students Partner with Centro Hispano

When Tennessee public schools closed their doors to in-person learning, a dozen UT students majoring in



English as a second language had their internships cut short. Interns and professors from the Department of Theory and Practice in Teacher Education quickly pivoted and collaborated with local nonprofit Centro Hispano to provide e-learning opportunities to 40 ESL students in the greater Knoxville area. “Without a doubt, we’ve been able to serve more kids and at a higher quality because of this collaboration,” said Megan Barolet-Fogarty, Centro Hispano’s youth and family engagement director. “It’s heartwarming for me to know our kids are not going to be working to make up six months of learning loss. They’ve not lost this semester.”

String Project Brings Music Lessons to Area Kids

Geoffrey Herd, a full-time lecturer in UT’s School of Music, shares his passion for stringed instruments with Knox County youth through the Strings Project, which received a \$3,500 grant from the Tennessee Arts Commission’s Arts Building Communities program in the summer. The project provides instruments and private lessons to students at Sarah Moore Greene Magnet Academy who participate in the YMCA after-school program.

Students Design Spaces for Black Entrepreneurs in Cal Johnson Building

Liz Teston, associate professor of architecture, led her second-year design students to investigate how societal issues have influenced the built environment of Knoxville. In a fall-semester studio themed People,

Spaces, Experiences, and Politics, Teston and her students focused their research on Knoxville’s Cal Johnson Building with a goal of creating a welcoming space for black entrepreneurs. It was built in 1898 by Cal Johnson, who was born into slavery and became a prominent businessman and philanthropist in the region. The building is the only remaining example of his work, as the rest were demolished during urban renewal.

Legal Clinic Studies Systemic Racism

The UT College of Law Legal Clinic was awarded a \$3,000 grant by the Division of Diversity and Engagement to support the clinic’s ability to be more responsive to communities of color most harmed by systemic and structural racism. As a complement to the grant, the Legal Clinic launched a virtual discussion series, Critical Conversations on Race, to examine systemic and structural racism.



COVID-19 OUTREACH

3D-Printed PPE Donated Statewide

Working against time, labs across campus printed face-shield headbands and other personal protective equipment to be shipped statewide to aid frontline health care workers. In three days, the university produced more than 1,000 face-shield headbands.



Nursing Students Aid in Vaccine Distribution

Students in the College of Nursing embraced the Volunteer spirit to fight the spread of COVID-19 by volunteering throughout the year at testing sites, helping with campus saliva testing, and providing health screenings. With faculty supervisors, student nurses worked at vaccination clinics throughout Knoxville with partners including Covenant Health, the Knox County Health Department, Cherokee Health Systems, UT Medical Center, and Faith Leaders Church Initiative.

Supporting Principals Virtually during Pandemic

The Center for Education Leadership continued its partnership with the Tennessee Department of Education to provide professional development to principals across the state. The Tennessee Principal Professional Learning Series addressed COVID-19

issues and provided small group dialogues around strategies and solutions. Future topics in the series will address the learning needs of students throughout the academic year. The initiative is funded by private philanthropic support and Tennessee SCORE, with in-kind support from faculty in the College of Education, Health, and Human Sciences.

UT Groups Assist in Economic Recovery and Inform COVID Policy

The Economic Recovery Group, established by Tennessee Governor Bill Lee to reboot the state's economy, called upon UT to assist in the collection and analysis of survey data. The Howard Baker Jr. Center for Public Policy and the Social Work Office of Research and Public Service conducted surveys every other week to track citizens' attitudes toward safety and economic well-being as the state reopened.

UT's Coronavirus-19 Outbreak Response Experts (CORE-19) team, made up of researchers in public health, economics, public policy, agriculture, veterinary medicine, and other disciplines, was formed to provide timely and evidence-based information for policymakers, industry, and the public on pressing questions regarding the pandemic. Resources from the group include a case tracking map and case projection calculator for Tennessee. The team has produced policy briefs on COVID-19 vaccinations, flu shots, death statistics, herd immunity, testing availability, and related topics.

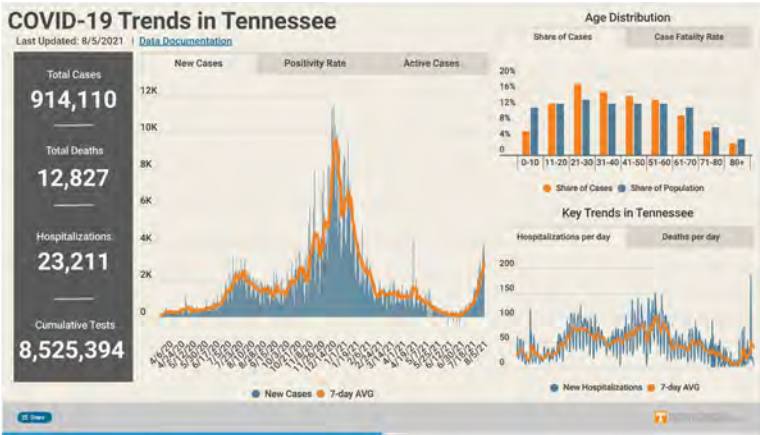


TNSDC Maintains Databases, COVID Dashboards

The Tennessee State Data Center in UT's Haslam College of Business created a dashboard of COVID-19 indicators for the state. The interactive map includes interactive metrics available at both state and county levels. The center is a cooperative program between UT, the State of Tennessee, and the US Census Bureau. UT's Boyd Center for Business and Economic Research serves as the lead statewide agency for the State Data Center program, with a goal of providing education and access to timely demographic and economic data for Tennessee citizens, business, and government agencies.

Engineering Faculty Studying Disease-Resistant Buildings

As we progress to a more open economy, containment and indoor transmission have become hot topics in public health and safety. Qiang He and Shuai Li, both assistant professors in the Department of Civil and Environmental Engineering, paired their expertise in environmental microbiology and infrastructure engineering to pursue a unique strategy: disease-resistant buildings resilient to pathogen transmission. Their project is funded through a Rapid Response Research (RAPID) grant from the National Science Foundation.





SUPRIMA



UT Participates in Statewide Mask Partnership

UT joined a group of 29 organizations and businesses across the state to provide masks to the community. The initiative was a partnership with Governor Bill Lee's Economic Recovery Group to distribute more than 250,000 free and low-cost face coverings to citizens across the state.

Supercomputer Identifies Potential COVID-19 Drugs

Summit, an IBM-built computer, occupies the space of two tennis courts at Oak Ridge National Laboratory and has the capability to complete 200 quadrillion calculations per minute. Over two days in March, it simulated a promising list of drugs to fight COVID-19 by narrowing a list of 8,000 known drug compounds to 77. The simulation was conducted by UT-ORNL Governor's Chair for Molecular Biophysics Jeremy Smith.

UT System Connects Businesses and Nonprofits with Resources

While the pandemic has affected the lives of people everywhere, it has also sparked great innovation. In partnership with the Alliance for Better Nonprofits, the Tennessee Chamber of Commerce and Industry, and the Tennessee Manufacturers Association, the UT System launched a free fall webinar series, *Pandemic to Possibility*, featuring university experts, alumni, business and nonprofit leaders, and entrepreneurs from across the state.

UT Advocacy Clinic Fights Evictions

During the initial weeks of the COVID-19 pandemic, Professor of Law Wendy Bach saw the potential for illegal evictions. As a result, the college's Advocacy Clinic partnered with the University of Memphis School of Law to conduct a statewide survey, create model pleadings and know-your-rights materials, and publish an op-ed in the *Daily Memphian*.

CIVIC ENGAGEMENT AND PUBLIC POLICY

Governor's Chair Appointed to National Science Foundation Board

Suresh Babu, UT-Oak Ridge National Laboratory Governor's Chair for Advanced Manufacturing, was appointed to a six-year term on the National Science Foundation Board. Babu is one of the nation's leading experts in developing advanced materials. His research helps widen the scope of advanced manufacturing and additive manufacturing, also known as 3D printing. The board advises Congress and the president and shapes NSF policies and research.

UT System Launches SMART Policy Network

In October, the UT System formed the Substance Misuse and Addiction Resource for Tennessee (SMART) Policy Network. The network—a group of the state's leading researchers, health care and criminal justice professionals, public policy specialists, and community partners—provides evidence-based information on substance abuse and misuse to connect and inform communities and decision makers. SMART hopes to become a trusted resource for actionable data-driven nonpartisan policy information.

UT to House Federal Research Data Center

In June, the US Census Bureau approved UT to house a Research Data Center—a secure Census Bureau facility where researchers working on approved projects can access restricted-use data from various federal and state agencies. The centers have the computing capacity to handle large data sets and complex calculations, and researchers around the country can collaborate through a secure computing environment. The UT center will be a branch of Atlanta's Federal Statistical Research Data Center.

Teaching Project Serves Tennessee's Appalachian Communities

For nearly two decades and counting, Tim Ezzell, research assistant professor in the Department of Political Science and the Institute for a Secure and Sustainable Environment, has been taking students into Appalachian communities to serve. Ezzell's sustainable communities course contributes to the Appalachian Teaching Project, a federal applied research program for Appalachian college students that is a partnership between about a dozen universities from across the region.

Law Professor's Research Influences Congressional Report

Investigation of Competition in Digital Markets, a report released in October by the US House of Representatives, is described by the *New York Times*



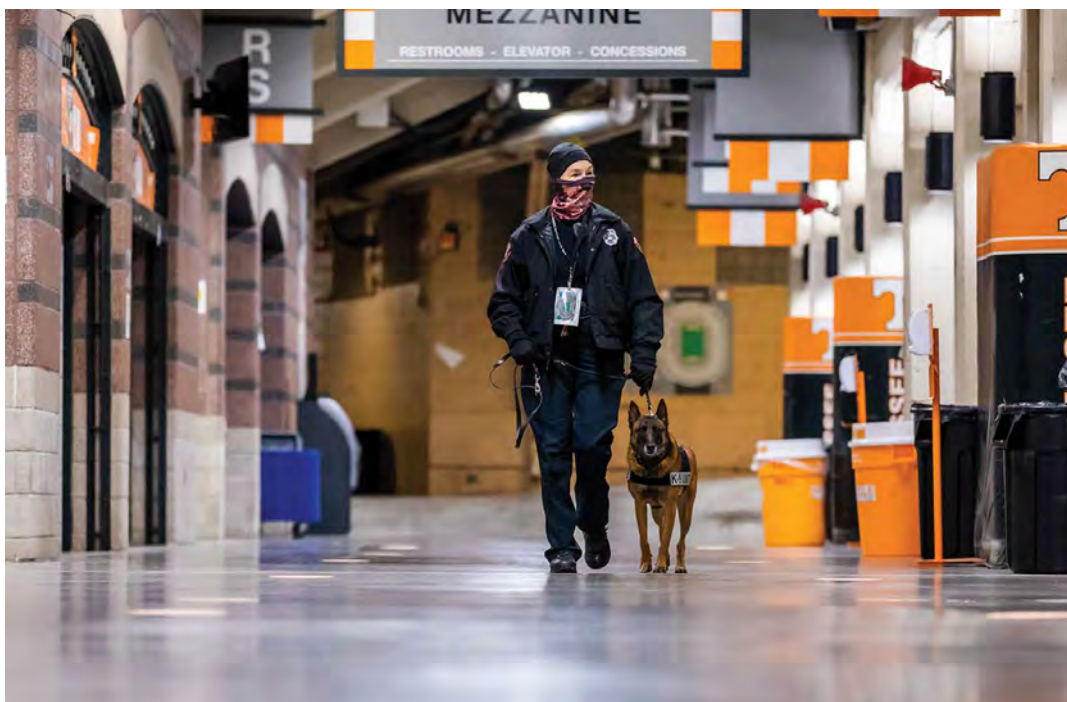
as “the most significant government effort to check the world’s largest tech companies since the government sued Microsoft for antitrust violations in the 1990s.” The report substantively incorporates the research and recommendations of Maurice Stucke, the Douglas A. Blaze Distinguished Professor of Law, one of the scholars who provided comments to the House Judiciary Committee’s Antitrust Subcommittee.

Students Participate in Advocacy Bootcamp for Disability Rights

The disABILITY Resource Center is a center for independent living with branches in Knoxville and in Hazard, Kentucky. In January, the center partnered with OCEO’s Imagine Tennessee program and Tennessee Wesleyan University to host an advocacy bootcamp for undergraduate students with disabilities. Students improved their individual knowledge and understanding of how to successfully advocate for and promote inclusion and independence for people with disabilities.

UTPD Wins Statewide Award

For the second year in a row, the UT Police Department placed first in the university police category of the Law Enforcement Challenge, a program of the Tennessee Highway Safety Office. In 2020, UTPD led 250 programs for the campus community that educated attendees about the dangers of alcohol, drinking and driving, distracted driving, and speeding; the importance of wearing seat belts; and pedestrian and bicycle safety.



SCIENCE, TECHNOLOGY, ENGINEERING, THE ARTS, AND MATHEMATICS

CRAFT Partnership Introduces Computational Thinking in Early Childhood

Three faculty members in the College of Education, Health, and Human Sciences received a \$1 million grant in September from the National Science Foundation to bring culturally relevant robotics education to hundreds of preschoolers, their families, and preschool teachers in Knoxville's Lonsdale and East Knoxville communities. The project—Culturally Relevant Robotics: A Family and Teacher Partnership, or CRAFT—seeks to promote computational thinking and a sense of belonging in computer science specifically for Black and Latinx children and their families.



Project leaders are Frances Harper, assistant professor of STEM education, and Lori Caudle and Margaret Quinn, both assistant professors of child and family studies.

NIMBioS and GAMES Bring Virtual Programming to Middle School Students

In the fall, UT's National Institute for Mathematical and Biological Synthesis (NIMBioS) partnered with a campus program, GAMES—Girls Achieving in Mathematics, Engineering, and Science—to host a series of virtual events for middle schoolers. GAMES works to promote girls' interest and confidence in STEM using chess and other strategy games to teach metacognition, computational thinking, and problem-solving. Webinars were streamed live and recorded for later viewing.

UT Libraries Expands Access to Resources

Sponsored by UT Libraries, Big Orange STEM Saturdays (BOSS) and a related program for educators, EduBOSS, provide STEM outreach and professional development to the local community. When COVID-19 shut down most in-person gatherings, the annual fall BOSS conference was restructured for accessibility and engagement with a virtual audience. This approach allowed UT to invite other math and science programs

across the state to participate. BOSS and EduBOSS are made possible through partnerships with three other UT units: the College Access and Persistence Services Outreach Center, the Center for Enhancing Education in Mathematics and Science, and the East Tennessee STEM Hub.

Filament Tower Receives National Composites Award

The UTK Filament Tower, fabricated by Assistant Professor Marshall Prado and 23 students and staff members in the School of Architecture, received the 2020 ACE Design: Most Creative Application award in December. The tower, a 30-foot latticelike fiber composite design, was constructed using robotics in the Fab Lab on campus. Its composite material is several times stronger than steel but lighter in weight, and the tower opens the door for the use of performative material in efficient and sustainable construction.



HEALTH AND WELLNESS

UT Medical Center Leads Mental Health Programs

Working in a medical field is typically stressful—even more so during a pandemic. Two UT professors, Joan Rentsch in the College of Communication and Information and

David Patterson in the College of Social Work, began leading weekly sessions in mindfulness-based stress reduction with medical residents and employees at the UT Medical Center. Rentsch is the only certified mindfulness-based stress reduction instructor in Tennessee.

UT Institute of Agriculture Leads Regional Effort Decreasing Farmer Stress

A 2015 report from the Centers for Disease Control and Prevention found that the suicide rate in rural communities measured twice that of urban areas, and the issue has been exacerbated by the pandemic. The US Department of Agriculture's Farm and Ranch Stress Assistance Network serves people in farming, ranching, and other agriculture-related occupations and their families. In September, the UT Institute of Agriculture was chosen to coordinate the effort in the South for the three-year program, which spans 13 states and two US territories and includes more than 50 partner organizations.

OCEO Hosts Community Conversations Health Series

OCEO launched its Community Conversations Health Series, which brought together more than 100 community members at each session to learn from campus and community experts. Panelists discussed topics including health equity, mental health and wellness, and disability rights and advocacy.

UT Faculty Study Ways Technology Can Improve Hospitals

Randy Bradley and Bogdan Bichescu, both associate professors in the Haslam College of Business, are part of a team studying how hospitals can anticipate and meet rising information technology demands through the use of radio frequency





identification (RFID) and electronic data interchange (EDI). The team analyzed data from 3,727 hospitals across the country over the span of eight years. Their research, published in July, showed that hospitals could significantly lower their supply costs by combining various technologies. The study is one of the first to show such results for health care, offering a new point of departure for further research.

Student Basic Needs Coalition Hosts SNAP Access Day

Each semester, the Student Basic Needs Coalition and End Hunger/FEED Change host a SNAP Access Day. Event programming includes education on college student eligibility for SNAP—the Supplemental Nutrition Assistance Program, formerly known as food stamps—and a panel discussion comparing food justice and emergency aid. Collaborators include the Tennessee Justice Center,

Nourish Knoxville, and UT Extension. Participants receive vouchers to purchase goods at local farmers markets.

Urban Gardening Comes to UT

The Helping Hands Kitchen Garden at the UT Gardens received \$378,000 in July from the United States Botanical Garden and the American Public Gardens Association. The funding supports the creation and expansion of urban food-growing programs affected by COVID-19. To date, the garden has donated 150 pounds of fresh produce to local charities.

Center for Global Engagement Leads Effort to End Hunger/FEED Change

In UT's efforts toward the United Nations' goal of zero hunger by 2030, the End Hunger/FEED Change initiative was launched to raise awareness about the global issue of food insecurity. The initiative is a

collective effort across campus to highlight and increase awareness of all the ways UT is helping to address hunger across campus, statewide, and globally.

Collaborative Approach to Tackling Substance Misuse Provides Experiential Learning for Students

For Jennifer Tourville, a clinical assistant professor in the College of Nursing and the UT System director of substance misuse outreach and initiatives, collaboration is key to combating substance misuse. In October, the UT Legal Clinic partnered with Tourville and the UT Substance Misuse Community of Scholars to hold an expungement clinic in Dandridge, Tennessee. Together they assisted 70 individuals from Cocke and Jefferson Counties who have criminal histories linked to substance misuse.



BUSINESS AND ECONOMIC DEVELOPMENT



Tennessee RiverLine Announces 15 Partner Communities Across State

The Tennessee RiverTowns Program accepted 15 communities to its inaugural cohort in October. The program is affiliated with the Tennessee RiverLine, an initiative led by UT and the Tennessee RiverLine Partnership to create North America's next great regional trail system—a continuous system of paddling, hiking, and biking experiences along the Tennessee River's 652-mile reach. Participating communities will benefit from economic development, entrepreneurship opportunities, and quality-of-life amenities.

UT Named Innovation and Economic Prosperity University

In November, UT Knoxville was named an Innovation and Economic Prosperity University by the Association of Public and Land-grant Universities. The designation validates the university's role as an economic driver in the state as it relates to workforce development, community partners, and external stakeholders. UT is one of only three universities to earn this national recognition in 2020.

UTIA Awarded FAA Grant to Research Sustainable Aviation Fuel

In December, the Federal Aviation Administration awarded \$250,000 to researchers at the UT Institute of

Agriculture to evaluate regional biomass supply chains and the potential for supplying feedstock for domestic fuel production. A viable supply chain for western Middle Tennessee has been initially evaluated with the intentions of supplying 40 percent of renewable aviation fuel for Nashville International Airport. Other potential sites include Nashville and Memphis for the oilseed pathway and

Chattanooga, Birmingham, and Atlanta for the logging residues pathway.

UTIA Continues Leadership to Enhance Regional Dairy Income

Regional dairy businesses are expected to see greater success through a joint partnership that includes two UT units, the Center for Profitable Agriculture, and the Department of Animal Science, along with regional experts from Kentucky and North Carolina. A \$6 million grant from the US Department of Agriculture is providing producers with training in managing financial risk and evaluating ways to develop and market value-added products.

GLOBAL ENGAGEMENT

Center for Sport, Peace, and Society Launches Disability Rights Project

UT's Center for Sport, Peace, and Society is a social enterprise committed to creating a more peaceful, equitable, and inclusive world through sport-based social innovation. In celebration of the 30th anniversary of the Americans with Disabilities Act, the CSPS launched the Global Disability Rights Advocacy Project in July. The project includes a collection of resources showcasing

laws that protect the rights of people with disabilities worldwide and an advocacy toolkit to help people become champions for inclusion.

UT Joins International Education Initiative

The UT Institute of Agriculture announced in December that a partnership with Colegio de Postgraduados (ColPos) Campus Córdoba in Mexico has been awarded \$25,000 in funding from the 100,000 Strong in the Americans Innovation

Fund, a hemispheric-wide education initiative of the US Department of State aimed at increasing higher education partnerships across the Western Hemisphere.

Fulbright Scholarships Awarded

The university has two students receiving Fulbright awards for the 2021-22 academic year: Ashlyn Schwartz, a doctoral candidate in the Department of Public Health, and Jenna Watson, a doctoral student in the Department of Anthropology. Schwartz, who received the Fulbright Doctoral Research Grant, will complete a 10-month fellowship in France investigating how adverse childhood experiences are related to binge drinking, brain structure alterations, and mental health challenges among French college students. Watson, a recipient of the Fulbright Open Study/Research Award, will continue her research, a bioarcheological investigation of migration, diet, and health in late medieval and early modern Romania, in Bucharest, Romania, beginning in October.



FUNDING FOR BROADER IMPACT

Senior Design Projects Receive UTRF Sponsorship

Senior Design is a two-semester course that allows students in the Department of Mechanical, Aerospace, and Biomedical Engineering to apply the knowledge and skills they have acquired in engineering and science to solve an actual problem within an agency, corporation, or the community. The team-oriented course is required for all students when they reach their senior year.



This year, the UT Research Foundation sponsored three projects: a no-drift chemical applicator accessory for backpack sprayers to prevent spray drift damage during the application of herbicides; a micro agricultural mower to improve soil health, reduce the use of pesticides, and decrease labor in the food production industry; and a portable device to more accurately collect rotational traction information on sports playing surfaces.

Community-Focused Projects Receive Systemwide Grants

Three projects supported by OCEO's Imagine Tennessee program received One UT collaboration grants in 2020. A new funding program, One UT, is aimed at supporting innovative ideas, creating collaborative opportunities, and advancing the university in student success, research, and outreach and engagement. Awardees included GAMES (Girls Achieving in Mathematics, Engineering, and Science), led by Professor of Mechanical, Aerospace, and Biomedical Engineering Xiaopeng Zhao; Digital Literacy in Tennessee, led by Agriculture and Natural Resources Librarian Isabella Baxter and Assistant Professor of Agricultural and Resource Economics Sreedhar Upendram; and Orchestrating the Efforts to Fight the Opioid Crisis in Tennessee with Geospatial Technologies, led by Professor of Geography Liem Tran.







DIVERSITY & ENGAGEMENT

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