

MAYNARD MATHEMATICS & COMPUTER SCIENCE BUILDING

COLLEGE OF
STEM
ANNUAL REPORT





It is my pleasure to present the 2024 Annual Report for the College of Science, Technology, Engineering & Mathematics (STEM) at Austin Peay State University. This report showcases our achievements, highlights the incredible work of our faculty, staff and students, and demonstrates our commitment to excellence in STEM education and research.

Over the past year, our college has made significant strides in advancing our mission of providing high-quality, innovative, and engaging educational experiences for our students. We have continued to invest in cutting-edge research and forged dynamic partnerships with industry leaders to ensure that our students are well-prepared for the challenges and opportunities of the 21st century.

In this report, you will find stories of groundbreaking research, student success, and community engagement that exemplify the spirit of innovation and collaboration that defines our college. From our award-winning faculty to our talented and diverse student body, the Austin Peay College of STEM is a vibrant community of scholars, researchers, and leaders who are making a difference in the world.

As we look to the future, we remain committed to our vision of being a national leader in STEM education and research. We will continue to invest in our people, our programs, and our partnerships to ensure that we are at the forefront of scientific discovery and technological innovation.

Thank you for your continued support of the Austin Peay College of STEM. Together, we are building a brighter future for our students, our community, and our world.

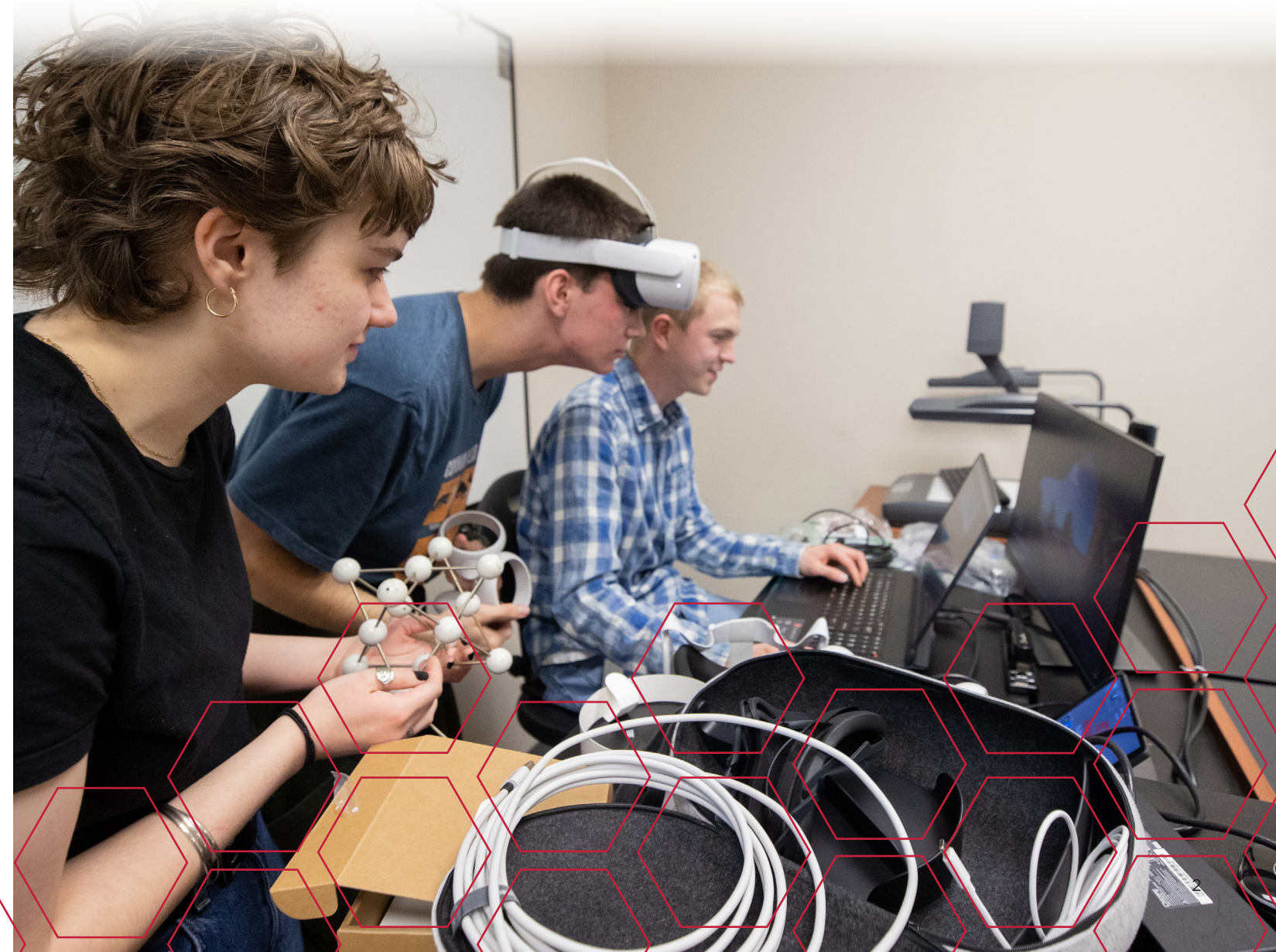
Regards,

A handwritten signature in black ink that reads "Karen Meisch".

Dr. Karen Meisch
Dean of the College of STEM

MISSION

The College of Science, Technology, Engineering & Mathematics (STEM) provides studies for students in the areas of agriculture, astronomy, aviation science, biology, chemistry, computer science, earth and environmental sciences, engineering physics, engineering technology, information systems, information technology, mathematics and statistics, medical laboratory sciences, radiologic sciences and physics. Our outstanding, discipline-based programs are student-centered and designed to prepare students for responsible positions at all levels of research, industry, education, medicine and government positions.



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ALUMNI
We want to hear from you! Scan this code to update your contact information so we can reach out to connect you with events in your area or an invite to campus!

GIVE TO THE COLLEGE
If you're looking for a way to give back, consider a donation to the CoSTEM Fund of Excellence! These funds go to support initiatives, needs, and priorities set forth by the College, allowing for the best access and usability for our students, faculty and staff.



Yuriy Holovchak Earns Goldwater Scholar Accolades



Yuriy Holovchak, a double major in Engineering Physics and Computer Science, won the prestigious Barry Goldwater Scholarship in 2023, becoming the first Austin Peay State University (APSU) student to receive the honor since 2013.

Holovchak was one of just 410 students nationwide to receive the award out of an estimated pool of over 5,000 college sophomores and juniors. The twice-published scholar plans to pursue a career in materials research, and his goal is to earn a doctorate in physics. He hopes to conduct research in quantum information science and materials development at national labs and aspires to create a company dealing with quantum computing technology.

The Goldwater Scholarship is the preeminent undergraduate award of its type in the natural sciences, engineering, and mathematics fields. The scholarship program honoring Sen. Barry Goldwater was established in 1986 to foster and encourage outstanding students to pursue research careers in these fields.

Holovchak is currently conducting research on phase-change materials, among other academic pursuits, while finishing up his undergraduate degree. Holovchak's win marks the fifth time an APSU College of STEM student has won the award. Previous recipients include Mason Yost and Drew Kerr in 2012, and Chris Hayes and Krissy Knight in 2013. Samuel Cupp, a physics student, also received an honorable mention in 2013.

Hannah Alloway Studies at Yale

Hannah Alloway, a Biology graduate student, spent two weeks last summer in New Haven, Connecticut, learning double digest restriction-site associated DNA sequencing (ddRADseq) to further her research on freshwater darters, which are colorful, small, bottom-dwelling fishes found in freshwater rivers and streams of North America. She will teach the techniques taught to her by the graduate students and professors at Yale University to APSU faculty and students to further their understanding of this new cutting-edge method of examining genetic variations in organisms.

APSU Students Living Out Experience of a Lifetime Thanks to IRES Grant

Seven APSU students from the College of STEM made what has become an annual summer trek from Clarksville to Europe as part of the National Science Foundation's (NSF) IRES Grant Program.

The International Research Experiences for Students (IRES) program provides high-quality education and professional development activities for STEM students through NSF-funded research opportunities. Its goal is to build a diverse, globally engaged workforce with world-class skills.

The program, which began in 2022, will run until at least 2025 and has so far sent 18 Austin Peay students on this life-changing journey to the Czech Republic, France and Poland to study glass and other amorphous materials. Student researchers have presented their findings at the University of Rzeszow at the end of each summer session.

In 2024, the following students explored the continent and learned cutting-edge lab techniques: Jackson Brown, Asjion Catlett, Faith Clark, Jair Martinez, Aidan Milam, Joshua Rye and Tanner Sigears.

This material is based upon work supported by the National Science Foundation International Research for Students (IRES) grant (Project No. NSF OISE-2106457).



2024 Posters at the Capitol

Eight student researchers from APSU's College of STEM and Middle College presented their work to lawmakers and legislators at the annual Posters at the Capitol event on February 14, 2024, in Nashville.

In addition to showcasing their research to peers from other state institutions, these standout students presented their findings to state Sen. Bill Powers and state Rep. Jeff Burkhart. APSU Provost Maria Cronley and Dr. Karen Meisch, the dean of the College of STEM, were also in attendance. The event featured a morning photo opportunity and Q&A session on the Capitol steps with Gov. Bill Lee.

Posters at the Capitol is an annual event where undergraduate students from across Tennessee who are studying science, technology, engineering, and mathematics can share their research projects with lawmakers at the Tennessee State Capitol in Nashville. The event allows students to display their research and engage with policymakers to showcase the significant impact of their work on the state's economy and future.

Govs on the Go in Huntsville

In March, students from the College of STEM experienced a new opportunity thanks to a partnership between the College and Career Services. Fifty APSU students received extensive face-to-face time with Huntsville-area employers, then enjoyed lunch, a speaker from the Huntsville Chamber of Commerce, and a tour of the US Space and Rocket Center in the afternoon. The day-long event concluded with a dinner honoring APSU's College of STEM alumni in the greater Huntsville area for their contributions in the Space Race and other areas of scientific innovation. The alumni honored were:

Thomas Bloodworth
 Brace Daniel
 Anita LeRoy
 Dr. Ron I. Miller
 Dr. Adrian Parker
 Jim Roe
 Lori Schultz
 Eric Schwartz
 Gray Settle

The Third Annual Innovation Experience Showcases Student Research

The College of STEM held its third annual Innovation Experience on Thursday, April 18, 2024. The event showcased the cutting-edge work of STEM majors to the public while enabling industry partners to recruit talented students for their organizations.

APSU students submitted 15 projects to compete for the ultimate prize, awarded by a committee of local industry leaders ranging from Google and EagleWerx employees to college staff members. Campus and community leaders were invited to support the students' work, engage them with questions, and encourage them to further develop their research skills.

This year's winners:

- **First Prize - Meleah Lanier** (*double major in Engineering Physics and Physics*)
- **Second Prize - Adam Hodge, Felix Peralta, Gabe Rodriguez, and Russell Wipert** (*Engineering Technology*)
- **Third Prize - Michael Graff and Jair Martinez** (*Engineering Physics*)

During the event, the College of STEM and APSU recognized Novelis with the Innovation Experience Business Collaborator Award for the company's significant contributions to the University. Novelis has been part of several advisory boards within the College of STEM and opened its doors to the next generation of engineers by providing APSU students and faculty with extensive training, knowledge, and professional development opportunities.



Dr. Thompson Honored for Advocacy Efforts

Dr. Jennifer Thompson, a professor in the Department of Allied Health Sciences and director of the radiologic technology program, was honored in radiologic technology, was honored with several prestigious national awards and recognitions for her advocacy work and contributions to the field during the 2023-24 academic year.

In the fall, Thompson received the American Registry of Radiologic Technologists (ARRT) Gold Standard Award for her advocacy efforts and student simulations with nursing, showcasing a commitment to quality, safety, patient care, and the profession. A few months later, she was honored with the American Society of Radiologic Technologists (ASRT) Advocacy Award.

Thompson also received the Radiation Therapist Distinguished Author Award in Honor of Harold Silverman for her article "Exploring the Need for Clinical Preceptor Training in Radiation Therapy," co-authored with APSU colleagues Tim Catalano and Drs. Heather Phillips and Eleanor Jator. The \$1,000 prize was donated to the ASRT Foundation.

Dr. Smith Selected for Groundbreaking Dark Matter Research at Fermilab

In Summer 2023, Dr. J. Allyn Smith and two Physics, Engineering, and Astronomy students, Meagan Porter and Sean Peete, participated in the Department of Energy's Visiting Faculty Program at Fermi National Accelerator Laboratory (Fermilab).

Fermilab is an acclaimed research lab that brings together the world's best physicists and astronomers. The Visiting Faculty Program allows faculty members from across the U.S. to work with renowned experts and further advance our knowledge of the universe. Prospective participants must have an outstanding research record and a strategy for how the experience will improve their home institution.

Smith worked to calibrate the Dark Energy Survey (DES) and the planned Rubin Legacy Survey of Space and Time (LSST). DES is an ongoing astronomical survey investigating dark energy, a mysterious force causing the universe's accelerated expansion. Scheduled to last 10 years, the Rubin LSST will surpass DES in size and strength.

APSU Faculty on Boards of Directors

Austin Peay CoSTEM faculty have risen to the top of their fields, and with that ascension, our professors have assumed leadership positions across the nation, shaping policy and influencing the future of their organizations.

The following faculty members are on boards or equivalent high-level positions within their organizations:

Dr. Audrey Bullock (Mathematics and Statistics) - 4-year College Representative, Middle Tennessee Mathematics Teachers

Dr. Mollie Cashner (Biology) - Member, American Society of Ichthyologists and Herpetologists Board of Governors

Dr. Nicholas Coleman (Computer Science and Information Technology) - Commissioner, ABET Computing Accreditation Commission

Dr. Eugene Donev (Physics, Engineering and Astronomy) - Section Representative, the American Association of Physics Teachers

Dr. Brad Fox (Mathematics and Statistics) - Member, Executive Committee of the Mathematical Association of America

Dr. Catherine Haase (Biology) - Chair of the Sponsorship Committee; Chair of the Auction Committee; Member of the Policy and Public Relations Committee; Member of the DEI Committee, North American Society for Bat Research

Dr. Zeinab Haratipour (Chemistry) - Alternate Councilor, Nashville Local Section of the American Chemical Society

Dr. Leslie Hiatt (Chemistry) - Alternate Councilor, Nashville Local Section of the American Chemical Society

Dr. Heather Phillips (Allied Health Sciences) - President, American Society for Clinical Laboratory Science of Tennessee

Dr. Perry Scanlan (Allied Health Sciences) - President, Alpha Mu Tau Fraternity; Board Member, American Society for Clinical Laboratory Science of Tennessee

Dr. J. Allyn Smith (Physics, Engineering and Astronomy) - Vice-Chair, Historical Astronomy Division of the American Astronomical Society; Chair, Kentucky-Area Astronomical Society; Chair, International Astronomical Union Commission B6: Photometry and Spectrophotometry

Dr. Jennifer Thompson (Radiologic Sciences) - Secretary, American Society of Radiologic Technology Board of Directors; Chairman of the Board, Tennessee Society of Radiologic Technologists

Dr. Jackie Vogel (Mathematics and Statistics) - Chair, Tennessee Mathematics Association Awards

Dr. Sudbrink Serves as Regional Expert

Throughout the academic year, Dr. Donald Sudbrink, professor and chair of the Agriculture Department became a sought-after speaker on a number of subjects that caught the eye of local media. He appeared on local news outlets to discuss Asian lady beetles (or Halloween beetles) last fall and became a featured voice on the cicada emergence of 2024 and the rare overlap between 13-year Brood XIX and 17-year Brood XIII that occurred this year. In May, Dr. Sudbrink's thoughts on the emergence appeared in The New York Times in addition to his local news spots.

Dr. Dunkle Named Inclusion Champion

Dr. Kallina Dunkle, associate dean for the College of STEM and professor of Geology, received the Inclusion Champion Award at the University's second annual Martin Luther King Jr. breakfast.

The APSU Institutional Culture Committee gave the award to Dr. Dunkle, recognizing her significant contributions to promoting diversity, equity, and inclusion (DEI) on campus. Specifically, Dunkle helped establish the CoSTEM Diversity, Equity, and Inclusion Committee in 2020, which has worked to gather campus-wide data on diversity, sponsor inclusion events, and recommend improvements to the University's climate. Under her leadership, the committee has collected campus-wide survey data, sponsored seminars on critical topics, promoted cross-college collaboration, and explored funding opportunities to advance CoSTEM's diversity and inclusion goals.

'Prairie Preacher' Joins Ranks of Garden Club of America's Honorary Members

In 2024, Dr. Dwayne Estes, Executive Director of Southeastern Grasslands Institute and Principal Investigator at the Center of Excellence for Field Biology, was named an honorary member of the Garden Club of America (GCA), a nonprofit national organization that comprises 199 member garden clubs with nearly 18,000 members who devote energy and expertise to projects in their communities and across the U.S. Founded in 1913, the GCA leads in horticulture, conservation, creative arts, historic preservation and environmental protection.

The Garden Club of Nashville nominated and the Little Rock Garden Club seconded Estes, whose advocacy for native grassland restoration makes him an ideal member of the prestigious institution. Known as the "Prairie Preacher," Estes raises awareness about the largely lost and forgotten historical grasslands that once stretched across 24 states from New York to Texas. In addition to grassland conservation and restoration, his other research interests include plant diversity, plant conservation, natural history and historical ecology.

CoSTEM Faculty Honored at Convocation

A trio of CoSTEM faculty were honored by the University for their contributions to APSU, the greater Clarksville community, and achievements in their field.

Dr. Rebecca Johansen, a principal investigator in the Center of Excellence for Field Biology and a professor of Biology, won the Richard M. Hawkins Award, which recognizes a faculty member who has made noteworthy contributions to scholarship and creative activity. A respected ichthyologist, Johansen's contributions have elevated the work of many biologists, and she has 17 peer-reviewed publications and given nearly 100 presentations, many co-authored or co-presented with her APSU students.

Dr. Erik Haroldson, an associate professor in the Department of Earth and Environmental Sciences, was the College of STEM Socrates Award winner, which recognizes excellence in teaching for tenure-track faculty. Haroldson is a widely published expert in his field who consistently strives to hone his craft in science pedagogy. In the classroom, he implements strategies and practices learned through geoscience educator conferences and publications, and recent works from him have contributed to that literature.

Michelle Rogers, an instructor in the Department of Biology and the Center of Excellence for Field Biology, was honored with the Chamber of Commerce Distinguished Faculty Award for Community Service. Rogers' work with the Healthy Yards program helped educate residents to create healthier habitats for pollinators while avoiding harmful chemicals and was adopted by both the Clarksville Sustainability Board and Montgomery County.



The Next Generation

INSPIRING

Aviation Science Expanding

May was a very busy month out at Hangar 5 at Outlaw Field. The Aviation Science program received a brand-new Guimbal Cabri G2 helicopter, expanding the fleet to four Guimbals along with two Robinson R44 helicopters. Later in the month, APSU announced it had entered into a purchase agreement for the entire hangar from the Clarksville-Montgomery County Regional Airport, giving the University full control of the facility to enhance the learning environment for students and provide more space for the fleet to expand even further.

The developments are crucial for the support of the expanding program, which began with two employees and four leased aircraft in 2019 for its first 12-person cohort and has grown to a fleet of six helicopters, four of which are wholly owned by Austin Peay, and 12 instructors for the 53-student program. Graduates from the program have gone on to careers in flight instruction, aerial tourism and agricultural support.

Listen to Top Hat STEM Chat

There's a new podcast all about APSU's College of STEM! Top Hat STEM Chat brings in students, faculty, and alumni for a deep dive into their lives and careers and the role the College has played in shaping them into who they are today. Listen and subscribe wherever you get your podcasts!

CoSTEM Adds a Canine Friend

We've got a new pet around the department. Well, kind of.

R2Peay2, APSU's robotic dog, lives in the Technology Building, where he helps supplement lessons in the Engineering Technology, Computer Science and Information Technology and Physics, Engineering and Astronomy departments. Named after receiving more than 70 suggestions from APSU students, faculty, staff, and alumni, R2Peay2 can be programmed to perform a variety of tasks and instructions—in fact, thanks to Jody Alberd's programming acumen, R2Peay2 is already a pretty good dancer!



While other graduates might walk or drive to the Dunn Center for commencement, Bert Huddleston, an Aviation Science graduate, piloted a Robinson R-44 Raven II helicopter to campus to receive his degree in December 2023.



Austin Peay Awarded Trio of NSF Grants

The International Research Experiences for Students (IRES) program supports international research and research-related activities for U.S. science and engineering students. The IRES program contributes to the development of a diverse, globally engaged workforce with world-class skills. IRES focuses on active research participation by undergraduate and/or graduate students in high-quality international research, education, and professional development experiences in National Science Foundation-funded research areas.

APSU has received about \$360,000 in funding through this program to send undergraduate STEM students to Europe for 7 weeks in summer (May-June 2022-2025) to work on innovative science involving amorphous materials while exploring European lifestyle and culture.

Elsewhere in the College, Dr. Emmabeth Vaughn of the Physics, Engineering and Astronomy Department joined forces with Bobette Bouton in Teaching and Learning for an NSF Grant to research empathy in the field of Engineering. One of the duo's main research goals is to create an empathy scale so professional engineers and engineering students can track their empathy progression.

Dr. Kyle Benowitz also works under an NSF grant that allows him to oversee experiments that probe the intricate balance between parental effort and future reproduction in burying beetles; his grant, awarded in 2022, runs through 2025.

Dr. Haase Receives IGSA Grant

In September, Dr. Catherine Haase received word that her Intergovernmental Service Agreement (IGSA) contract with the United States had been granted - for 10 years and over \$2 million in funding. This contract isn't an extension per se of the three-year IGSA she received in 2020 that ended in June of this year, but rather a new contract that builds off the research Haase and her students conducted on Northern long-eared bats, doing acoustic surveying and mist netting—which involves catching, tagging, and tracking bats.

Over the life of the latest IGSA, Haase wants to expand on the work she and her students have already begun, fine-tuning what they know about the bats they're studying and delving further into what attracts them to these areas and the trees they've migrated toward. In addition, Haase hopes to be able to study the effects of habitat, foraging behaviors, land management, and disease, including white-nose syndrome—a devastating disease caused by a fungus with astronomically high mortality rates in certain species.

SIGI Grants Fund a Wide Array of Projects

The Southeastern Grasslands Institute (SGI) received a healthy round of funding during the academic year, helping expand the scope and scale of the vital work SGI is doing to aid conservation issues across the region.

Among these are \$8.8 million in funding over the next five years to restore native grasslands in national parks across the eastern United States, a grant from Google for \$100,000 to restore grasslands on its property just outside Clarksville, a grant from the U.S. Department of Agriculture (USDA) netting more than \$2 million, the Seeds of Success Initiative that partners with the US Fish and Wildlife Service and totaling more than \$250,000, and a partnership with Auburn University that yielded an additional \$56,000 thanks to the Tennessee Department of Environment and Conservation. SGI continues to do amazing work thanks to the grants they receive from these and many other partners, which now total more than \$5 million yearly in resources for the Institute.

Professors Receive First-Ever Mini-Grants from the College

For the first time, the College of STEM was able to offer CoSTEM Innovative Teaching Mini-Grants! These one-time grants are designed to provide funding in support of innovative ways to increase student success. The first winners are:

Dr. Eugene Donev to enhance the student experience with a high-impact practice (HIP) assignment in an introductory Physics course.

Drs. Anuradha Pathirana and Saeed Samadi-Dana for the virtual reality project undertaken in their Chemistry 2941 research class, which is developing a comprehensive chemical compound library within virtual reality.

Drs. Md. Ali Haider and Hossain Ahmed for the innovative teaching plan they put together to improve academic performance in Engineering Technology programs and provide the necessary support for students to reach their potential using engineering technology starter kits.

Chemistry and Biology Receive Preds Grants

Two grants from the Nashville Predators Foundation gave APSU Chemistry and Biology an opportunity to do some amazing things this year! Last fall, a grant from the Preds enabled the chemistry department, led by Drs. Leslie Hiatt and Anuradha Pathirana, to host a pre-semester bootcamp for APSU students, who learned about significant figures, lab skills (including the density of hockey pucks), conversion factors, and team building, then finished the event testing multiple hypotheses using FOAM cannons.

The second grant, received in May, helped finance APSU's first-ever Lab Explorer Summer Camp hosted by the Chemistry and Biology departments under the tutelage of Drs. Pathirana and Manisha Gupte. Designed for incoming sixth and seventh graders, Lab Explorer Camp is a full-day, weeklong camp, designed to engage students in a series of daily sessions that promise an exhilarating exploration of scientific wonders.

CoSTEM Awarded More Than 70 Grants for 2023-24 Academic Year

The College of STEM was awarded more than 70 grants for the 2023-24 academic year, a testament to the exceptional work and dedication of our faculty, staff and students. These grants, which included funding from state and national foundations such as Google, the Tennessee Wildlife Resources Agency (TWRA), the U.S. Department of the Interior, and the U.S. Fish and Wildlife Service, among many other esteemed institutions, totaled a record-breaking \$8.9 million. This amount is more than three times larger than any previous academic year in the College's history, highlighting our growing prominence in the field and our commitment to advancing research, supporting our students, and serving our community.

Thank you to all our College of STEM donors and supporters. Your generosity has been instrumental in advancing our mission, and your support enables us to provide exceptional resources, fund pioneering research, and create transformative opportunities for our students and faculty. We are deeply grateful for your commitment to our college and your investment in the future of STEM education and innovation.

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CoSTEM Hosts Local School Groups

Throughout the academic year, the College of STEM hosts an array of local school groups to generate interest in STEM activities and expose school-age children to University life. In 2023-24, these activities ranged from large demonstrations like elephant toothpaste to items under the microscope, from Earth and Environmental Sciences' augmented reality sandbox to the Biology departments' resident turtles. Students get hands-on learning opportunities during these sessions, with every department in the College of STEM committed to providing local kids with unique experiences they cannot get anywhere else.

APSU Offers Fascinating Summer Camps

APSU continues to offer fascinating, immersive camps for local kids during the summer to keep their minds sharp and active with instruction from our world-class instructors. In Summer 2024, a collaborative camp for students interested in the inner workings of a laboratory, with the goal of inspiring enthusiasm for the fields of chemistry and biology, was begun in a joint effort between the Department of Chemistry and the Department of Biology.

In addition to this new offering, APSU's Space Explorer Camp—allowing students to explore the cosmos while also engaging in fun and exciting activities such as building telescopes, making craters, and launching water bottle rockets—returned for a second year, as did the annual Coding Camps that engage kids interested in Roblox and Minecraft to craft their own worlds, among a host of other opportunities.

Pi Day Fun

The College of STEM celebrated Pi Day in style with a range of activities, challenges, races, and games on March 14 at Fortera Stadium. Highlights of the day included a 3.14-mile race starting at precisely 3:14 p.m., a pie-eating contest, trivia, foam cannon, pie-in-the-sky Frisbee contest, and a 3.14-legged race. Dr. Leslie Hiatt of the Department of Chemistry helmed the event, which she hopes to turn into an annual celebration of math on campus.

Govs Shine on STEM Basketball Night

At the annual CoSTEM Night for an APSU basketball game, the College set up around the concourse at the brand-new F&M Bank Arena, treating spectators to liquid nitrogen ice cream, R2Peay2, installations from many of our departments, a 3D printing demo, free aviator sunglasses for everyone, an appearance from our remote t-shirt cannon The Governor and free lab coats for APSU students! Plus, everyone was treated to a thrilling double-overtime win by the Govs!

Healthy Yards Takes Off

The Center of Excellence for Field Biology has partnered with the Clarksville Sustainability Board to help residents add more native plants and pollinators to local yards. The program, named Healthy Yards, has simple goals: to get participating residents to plant and maintain at least three native plants and to avoid using pesticides or herbicides to protect and develop habitats for native plants and pollinators.

Conceived and managed by Austin Peay biology professor Michelle Rogers, Healthy Yards is designed to educate local homeowners to reduce chemicals, providing a healthier environment for children and pets. Anyone interested in the program can visit the Healthy Yards webpage for tips and resources for finding and maintaining native plants.

GIS Center Assists in Tornado Help

When disaster struck in December, two APSU employees dropped everything to help coordinate an emergency response. Equipped with drones, data analytics skills, and rapid mapping technology, Geographic Information Systems (GIS) Center Director Mike Wilson and Project Manager Doug Catellier provided local authorities with detailed damage assessments that would normally take days or weeks to compile.

Within hours of the December tornadoes devastating Montgomery County, the pair were on the ground, surveying the wreckage and collaborating with emergency officials to target aid to the hardest-hit neighborhoods. While Wilson organized data at the Emergency Operations Center (EOC), his colleague piloted drones over disaster zones to capture aerial footage of collapsed roofs, uprooted trees, and other devastation. The data was then compiled into interactive maps and databases pinpointing each damaged property.

Damage statistics are crucial in expediting federal disaster aid and assisting emergency response. After major storms, local authorities submit assessments to the Federal Emergency Management Agency (FEMA), which decides on emergency declarations. Detailed follow-up surveys help connect impacted residents with recovery assistance. Wilson and Catellier's tech-enabled legwork after the Montgomery County tornado proved pivotal in securing a federal disaster declaration to mobilize resources.

Science on Tap Keeps Growing

Science on Tap, the College of STEM's monthly exploration of topics at Strawberry Alley Ale Works, continues to be one of the most fun events on the calendar. On the first Tuesday of every month during the academic year, a professor presents to the community on a topic they're passionate about, giving attendees the opportunity to learn from experts in their field and engaging in thought-provoking discussion while enjoying delicious local brews and food at Strawberry Alley.

These talks were wide-ranging in 2023-24, from Dr. J. Allyn Smith's discussion on going back to the moon ("Who, How, Why?") to Dr. Catherine Haase's Ultimate Galentines on the evolution of female relationships in the animal kingdom to Dr. Don Sudbrink's year-end discussion on cicadas and this summer's emergence. This free event is open for all ages, offering an engaging platform for researchers, faculty, and science enthusiasts to share their passion and knowledge with the public.



BY THE NUMBERS

3.14

Number of legs in the Pi Day Race at Fortera Stadium

9

Academic departments in the College of STEM

72

Scholarships that fall under the College of STEM umbrella

3,000

Acres of grasslands being restored by SGI in conjunction with the National Park Service

5

Austin Peay CoSTEM students who have won Goldwater Scholar Awards

18

Austin Peay students who have studied in Europe thanks to the IRES grant from the NSF

393.8

Percent increase in College of STEM Instagram reach in 2023-24

3,800

Percent increase in one-minute or longer views of the CoSTEM Facebook page

70

Nominations received with suggestions for what to name Austin Peay's robotic dog

400

Local students hosted by the College of STEM at the Dunn Center for the 2024 CMCSS Expo

13,700

Square footage of Hangar 5, home to the Austin Peay Aviation Sciences program

8

Student-researchers in the College who presented at Posters at the Capitol in February

440,000

Dollars earmarked for scholarships for College of STEM students

155 MILLION

Number of unique visitors to more than 150 College of STEM stories



Austin Peay
State University

CLARKSVILLE  TENNESSEE