small business



University of Tennessee at Chattanooga Magazine

volume two, issue two | Spring 2019

utc.edu/magazine

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MESSAGE FROM THE CHANCELLOR

This issue of *The University of Tennessee at* Chattanooga magazine will give the UTC community an appreciation of how experiential learning enriches academic life for our students and better prepares them for career success. Not only is the hard work of our students impressive, the creativity, passion and effort UTC faculty and staff have put into experiential learning will have alumni wanting to return to campus. Some of the stories may surprise you, and they all definitely will make you proud to be a Moc.

From future schoolteachers to engineers-in-training to aspiring financiers, you'll read about how our students are applying what they learn in the classroom to solve practical, real-world problems. Learning becomes fun as students seek solutions to problems facing our campus, community, state and world. Experiential learning gives many of our students a competitive edge when they graduate, confidence when they interview and the satisfaction of accomplishing something significant.

I want to acknowledge the many faculty, staff and community supporters who have helped UTC students with an experiential learning project. They literally open the door of opportunity for students. This is often the most time-intensive activity for our faculty, and it is one of the most significant for our students. Early in my career, a student on academic probation told me that I had to allow him to do research in my chemistry laboratory because he would flunk out if he did not see the practical side of chemistry; he needed to actually do it, not just read about it.

I allowed him to work in my lab and within one semester he was on the dean's list. That one student taught me the value of experiential learning. Since that time, I have seen students in every discipline benefit from hands-on, outside-theclassroom



learning experiences. Students are excited to learn and they find their way to meaningful careers.

I am proud of all that our faculty do to enhance the quality of a UTC education, of how our students embrace and flourish with experiential learning opportunities and of the positive impact our students have on our campus, community and

Enjoy this issue of The University of Tennessee at Chattanooga magazine!

> Steven R. Anale Chancellor









EXPERIENTIAL LEARNING

The Overview

By Gina Stafford



"Experiential learning."

Even if you've heard the term, you may be uncertain of its meaning.

At the University of Tennessee at Chattanooga, experiential learning very specifically refers to a high-priority and high-impact element of the UTC experience that uniquely puts students at the center of the university's value to its community and region.

Outdoor Chattanooga, a 15-year-old division of city government's Department of Economic and Community Development, is just one of countless examples. In 2018, the organization got a free dose of top expertise from UTC Assistant Professor Joy Lin and



UTC Assistant Professor of marketing Joy Lin

her students. A self-described "very outdoorsy person," Lin joined UTC in 2017 and a year later partnered her digital marketing class with Outdoor Chattanooga to assess and redesign its website for a better user experience. "I

saw in their newsletter they planned to revamp their website and sought input," Lin says. "I went to see them—we agreed more young people should get off their cellphones—and they embraced the opportunity for my students to conduct market research and give them input on the target market."

Whatever the academic discipline, says Bengt Carlson, UTC's experiential learning coordinator: "Experiential learning is just running theory through reality, putting ideas into practice and learning from that process. Since its inception in 2013, the number of students participating has grown to involve a third of the total student body."

The inception Carlson refers to is UTC's distinctive focus on experiential learning, formalized with the "ThinkAchieve: Beyond the Classroom" platform implemented in 2013. Students participate in specially designated programs—called "experiences"—and receive weekly email listings of campus and community events they can attend and must reflect and report on to earn points toward awards and recognition.

Designated experiences include serving as campus orientation leaders, financial literacy training, mentoring elementary schoolchildren toward collegiate careers, men's and women's leadership development and more. Weekly events cover the gamut, from the "Top Five Free Things to Do in Chattanooga" to a Native American heritage luncheon. Workshops are offered on everything from using 3D modeling software to conducting legal research.

Where the program really breaks out of the classroom, though, is in designated experiential-learning courses. These semester-long, for-credit courses

"The advantage for UTC to do experiential learning right is that we focus on undergraduates in a community that wants to engage our students and has real opportunities for our students."

present students with the academic understanding of a subject that they then compare to the reality of the subject as it impacts everyday life.

Accumulating a required minimum 120 points through a combination of the experiential-learning options earns "ThinkAchieve Graduate" status along with a UTC bachelor's degree. Besides incentivizing students to seek opportunities to compare course content to hands-on reality, ThinkAchieve also is about immersion in campus and community.

"You can make a compelling case that UTC is highly involved in its community," Carlson says. "Solutions Scholars, for example. They work with the Tennessee Small Business consortium over in the incubator on Cherokee Boulevard right on the North Shore. They get assigned projects for small businesses as clients, and they do research for the small businesses to help inform a decision or a problem being faced."

Beverly Brockman, who heads the Gary W. Rollins College of Business' department of marketing and entrepreneurship—home of Solutions Scholars—says students fill an unmet expertise need of local business. "The other part of it, and this is already happening, is that the students who are doing exceptionally well and are exceptionally dedicated and interested in working in this environment, they're hired by Solutions Scholars, Inc. to continue their work for a client over the holiday break or over the summer break. Beyond the semester course calendar.

"It doesn't always happen that you have partnerships that just work, but it has been a fantastic arrangement

between UTC; the instructor, Liza Soydan, a professional with her own consulting firm; and the Tennessee Small Business Development Center and its director, Lynn Chesnutt, who vets all the clients students work with."

Krysta Murillo is a visiting assistant professor in the midst of her third oneyear appointment with the UTC School of Education. In 2017, she and Lin were among five "Experiential Learning Faculty Fellows" selected to review obstacles to a more robust connection of theory to practice. Fellows also develop their own experiential-learning course, apply for experiential-learning course designation and share that experience with colleagues. "Not until I ventured out to participate in this ThinkAchieve cohort and listened to other professors talk about it in their courses did I know how much experiential learning is a part of UTC," Murillo says. "I was blown away. I never knew you could take a marketing course into a local business and ask about helping fulfill their unmet needs.

"Faculty are being encouraged across disciplines to think about their coursework. What could fit here to give students more meaningful applications than they would have without experiential learning? What would make this opportunity even better?" Murillo adds. "Being more competent in whatever your field gives all students an edge when they graduate, and here at UTC there's a great, great opportunity to do that."

Carlson says an appointed faculty and staff task force reviews applications from across campus for proposed new course offerings, both for-credit and non-credit. Proposals for new fall 2019 courses were due in February. >>



Bengt Carlson Experiential Learning Coordinator

"Each semester we are closing the gap between our understanding of our students' learning experiences and all they are actually doing, both in and beyond the classroom."

Most often, students report signing up for the obvious, tangible rewards such as priority registration, then find themselves overwhelmed by the intrinsic rewards they didn't anticipate. As Carlson reads from a satisfied student's email: "I signed up to get priority registration and I got all of this I never expected!"

Chancellor Steve Angle notes that experiential learning and courses that facilitate it at UTC reach far beyond the successful and highly visible ThinkAchieve platform. "There are so very many areas. There's undergraduate research, internships, practicum courses and something like

an apprentice model for music and theater students," Angle says. "The advantage for UTC to do experiential learning right is that we focus on undergraduates in a community that wants to engage our students and has real opportunities for our students.

"We have faculty in our theater program who want to have students learn by doing. In engineering, our students get the opportunity to engage in hands-on research with faculty and graduate students," adds Angle. "Between the campus and the community, we really can provide every student a meaningful experience."

The very first goal of the UTC strategic plan calls for it, in fact: "Transform lives through meaningful learning experiences."

To achieve that goal, the plan states: "All undergraduates will complete an internship, practicum, service project, research project, senior capstone, honors thesis or international experience."

In the most recently reported statistics, for the 2017-2018 year, 1,996 unique students participated in 62 different UTC experiential-learning courses. Another 181 unique students participated in events from Take Back the Night to the Multicultural Mentorship Program to various studyabroad opportunities. Another 378 students took advantage of experiences from PAWS (Postsecondary Awareness with Success), a mentoring program for elementary school



Krysta Murillo, Hunter Holzhauer, Bengt Carlson and Beverly Brockman

children, to High-Achieving Mocs Living Learning Community (HAM LLC) and more.

Since ThinkAchieve's inception in 2013, the number of individual students participating in each category has grown from 693 to more than 3,000—or about one-third of the total student body.

Launched in 2016, "ReSEARCH Dialogues" is a two-day, April celebration and exhibition of noteworthy achievements in scholarship, engagement, the arts, research and creativity involving undergraduates, graduate students and faculty. Four areas of competition are in podium and panel presentations, poster and display presentations, live performances and business pitches. In one year alone, from the event's second year to its most recent, 2018, participation increased by about 25 percent.

"The things we teach students in class should help prepare them to learn more by themselves," Lin says, 'and they need to be able to think for themselves after they graduate, no matter what their field. Because of the experiential-learning process, UTC students may have to go through some struggles, but they do so in an environment where there is a safety net. We are preparing them to go through struggles after they finish college. I don't just want them to get a job with what they learn in class. I want them to be able to keep a job by themselves, by what they know and what they can contribute."

EXPERIENTIAL LEARNING:

The Chancellor's Viewpoint

By Gina Stafford



How *good a tennis player* might you be if you stepped onto a court armed only with a racquet and a few weeks of lectures on the game?

That's the analogy Chancellor Steve Angle uses in describing the value and necessity of experiential learning to meaningful education. "For many students, the classroom experience is analogous to learning to play tennis by sitting in a chair, hearing about the dimensions of the court, where the boundaries are, the height of the net, what a racquet looks like and is used for, but until they play the game, their understanding is very limited," Angle says.

"It's not fun. It's not exciting. Experience tennis hands-on, however, and even if you are not good at it, you are at least hitting the ball."

To say nothing of the fact that stepping onto a tennis court and playing the game gives meaning to the rules, regulations and specifications behind it. Experiential learning takes what some scholars call "inert knowledge" and gives it meaning by requiring its use.

"What we are trying to do," Angle says, "is get our students to take their classroom knowledge and apply it to problems, to issues, to situations where they can do something meaningful with that knowledge and, as a result, it's lasting and impactful for them."

Throughout the United States, hundreds of universities large and small offer experientiallearning opportunities. Those can include internships, study abroad, service projects and cooperative education with a structured combination of classroom and work experience.

Experiential learning also can involve forcredit coursework governed by key principles for student learning and faculty assessment of that learning. Those include thoughtful student reflection on anticipated learning from the course at its outset and studious reflection at the course's end, comparing what was learned to what was expected and the impact of that learning on the student's knowledge and skill set. Course faculty also have a learning outcomes assessment rubric for use in determining grades.

Angle says experiential learning at UTC and its students are uniquely advantaged by the campus' location. "For UTC, our focus on the undergraduate experience and our location in the heart of a city like Chattanooga, with major employers all around our campus, with the business startup community that's here, with nonprofits, county government, city government—there is an incredible number of opportunities that other institutions just don't have."

Beyond downtown—from Volkswagen manufacturing to Wacker Polysilicon, and just south of the Tennessee state line, from carpet and flooring to the chemical industries in North Georgia, UTC students can find it is a short trip from theory to practice.

At the same time students are applying newfound knowledge—often partnering with other students they're gaining experience that will serve them well in the world of work, Angle says. "When you think of what life is like, what a job is like, there's the interaction with people," he says. "That's another part of the campus experience that I think helps people understand what it takes to accomplish things. Doing that in a context where you have some diversity and in a community where not everybody comes from the same background is very good preparation for the diversity and differences our students will encounter after they graduate."

Angle experienced the benefits firsthand as a student when he says undergraduate research another form of experiential learning—convinced him to major in chemistry. Later as a chemistry professor, he saw experiential learning inspire students who had previously struggled with motivation.

At UTC, he says, experiential learning ultimately has a mission-driven importance. "We're not a doctoral-intensive institution, or where success is publishing a peer-reviewed paper in a top journal," Angle says. "Graduating students who are prepared to go into the workforce is our success, and we measure our success by the value we add to the students we educate. That makes the impact we have on the students who graduate from UTC so much larger than for elite, highly selective institutions."

ENDURING ENCOURAGEMENT

GEAR UP Has Successfully Promoted College to Kids for Two Decades



Saasha Jones What attracted you to UTC in the first place? The financial aid package, apartmentstyle housing and the College of Business. Plus I knew so much about it from numerous campus visits with GEAR UP.

What is the best experience you've had at UTC? Studying abroad in Accra, Ghana, through a scholarship from TRIO, the nonprofit organization that funds programs, including Student Support Services.



By Shawn Ryan

Saasha Jones was a sophomore at Brainerd High School when she attended a

graduation ceremony at UTC. She was invited by a friend who was part of the university's GEAR UP program, Her friend's husband was graduating and they had made "Congratulations" signs to hold up as he walked across stage to accept his diploma. Loud cheers were also part of the plans.

"I vividly remember that moment," Jones says. "It made not just going to college realistic, seeing him graduate made graduating from college realistic. I had many students from my neighborhood go to college but so few graduated.

"Without GEAR UP (the acronym stands for Gaining Early Awareness and Readiness for Undergraduate Programs), I'm not sure that I could have," says Jones, who has earned bachelor's and master's degrees in business administration from UTC and is now a disability benefit specialist at Unum in Columbus, Georgia.

An initiative from the U.S. Department of Education, the program is designed to help middle through high school students get ready for college—or even get them interested in going to college if they haven't been interested before. "We're all about not just college readiness but also college success," says Hunter Huckabay, director of GEAR UP since its inception at UTC in 1999. "Our little motto is: Helping kids get to, pay for and succeed in college.

"What we think of it is: Helping our kids develop more options," Huckabay says. "A lot of times they'll say, 'Well, I don't know if I want to go to college,' and I say, 'Well, I don't either, but that's your decision. But I do know that you want to be the one who decides, and you don't want someone else to decide for you."

The academic unit recently received a seven-year, \$5.1 million grant from the Department of Education which will pay for such GEAR UP offerings as afterschool educational programs, summer camps, one-on-one tutoring, paying for teaching assistants in math and English classes and school counselor offices and providing professional development workshops for teachers and administrators. The program reaches out to each school to get a sense of what it needs for its students as well as listen to ideas from faculty and staff at the schools.

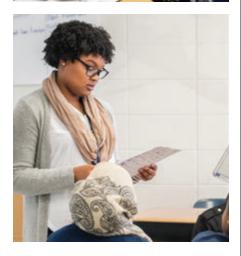
Jones' friends, the married couple at the UTC graduation, were afterschool and summer camp counselors in GEAR UP while students at the university. As a UTC student, Jones also worked as a GEAR UP volunteer.

Jones first came in contact with GEAR UP as a student at Orchard Knob Middle School and continued until she graduated from Brainerd High in 2007. At UTC, she volunteered at GEAR UP, working as an afterschool and summer camp counselor and as a school tutor, among other jobs. "I've hosted a College Knowledge Bowl, participated on multiple Q&A panels and conducted classes to discuss topics such as campus involvement, college prep, proper attire, etc. I've also written recommendation letters for former students," she says.

Being a mentor and counselor to middle and high school students was







just as important as helping them with their studies, she says. "I was given an opportunity to meet amazing students who are literally where I'm from who just need a helping hand, an encouraging word and a pat on the back when they accomplish what most would say is impossible. It's not impossible. But it takes a program like GEAR UP to make it so much easier.

"In the midst of all the visible examples of failure we grew up around, GEAR UP fed our flicker of hope," Jones says. "And can you believe, they were actually right! So many of us are doing amazing things now, no doubt, as a result of that program."

Elaine Swafford, executive director at Chattanooga Girls Leadership Academy, has worked with GEAR UP since 2004 when she was principal at

From Top: A member of the GEAR UP staff at UTC, Keith Mayes works with students at Dalewood Middle School, among others. Middle: Amani Keith, left, and Kyra Mynatt are Dalewood Middle School students who take part in the GEAR UP afterschool program. Bottom: Tia Jamison is member of UTC's GEAR UP staff.

Chattanooga's Howard School. Program officials are true partners, she says, and don't try to dictate what steps need to be taken at each school. "They don't come in and try to apply on you what they need for their program," Swafford says. "They ask, 'What do you need to get from us to get your school to move forward?' You get a lot of bang for your buck."

GEAR UP starts by attaching itself to sixth-and seventh-grade classes at each school. From then until the students graduate from high school, GEAR UP follows their progress academically. One of the main goals is to get the students up to gradelevel in math and reading. "Those are the foundational skills for all the academic areas," Huckabay says. "The reason we get the grant and they connect us to the schools is that the students at those schools are behind; they're not at grade level."

The schools involved in the newest group are Orchard Knob and Dalewood middle schools, Howard and Brainerd high schools, East Lake Academy and CGLA, a total of about 1,200 students. All are in the Hamilton County School System's Opportunity Zone.

"The ranks of the Opportunity Zone's leadership team are replete with principals, counselors, teachers and curriculum coaches who have a long history of utilizing GEAR UP resources," Huckabay says. "The Opportunity Zone has created a huge springboard for GEAR UP."

In some of these high schools, eight out of 10 ninth-graders fail to enroll in college on time. "In other words," Huckabay says. "without the kind of help we can bring them, 80 percent of these students will miss one of the great experiences of this world—college—and fall out of the political, economic and social mainstream."

Not sticking strictly to academics is one of GEAR UP's critical elements, Swafford echoes. "They help individual children become successful in areas that otherwise, without that extra help, they would not have been able to reach," she says.

Those areas include social skills and school engagement, Huckabay says, which can be key pieces for improving the students' academic abilities. "We try to build that into our programs. We'll bring in mentors who come in just to work with students on the issues of the day," he says.

Engaging students in more than just classroom lessons may keep them from dropping out in high school, Huckabay adds.

Jones calls GEAR UP "a planet" filled with people who tackled the overwhelming task of getting kids to enroll and graduate from college.

"How?" she asks. "The same way you eat an elephant. One bite at a time."

20 Years and Counting

UTC's College of Health, Education and Professional Studies continues to develop experiential-learning programs that enable in-the-field training for many of its students. GEAR UP is a program of outreach that has prospered as a hands-on program for UTC students for 20 years.

Since 2006, UTC's GEAR UP has:

- Reduced dropout rate from 30 percent to **19** percent
- Increased high school graduation rate from 58 percent to **70** percent
- Increased college enrollment rate from 21 percent to 39 percent

Objectives of \$5.1 Million Grant

- Reduce dropout rate to **10** percent
- Increase high school graduation rate to 85 percent
- Increase college enrollment to 64 percent

MOCS WIN NATIONAL STUDENT ROCKET COMPETITION

Never Giving Up Is Only Part of This Story

By Shawn Ryan

The snake may have been poisonous,

maybe not. Chest-deep in swamp water, no way Caleb Pace was getting close enough to make sure one way or the other. "I didn't want to find out. All I knew is that it was a snake," he says. "I said 'It's probably about time to get out."

Besides, he was searching for something far more important as he waded through the mucky, murky water in the swamp near Tampa, Florida.

He needed to find Phoenix.

That's the name the UTC engineering team gave the bright-orange rocket that would propel them to the No. 1 ranking in the country for student-built rocket projects. Phoenix vaulted to more than 11,000 feet, a number that drew an audiencewide gasp at the ceremonies where the team — the Rocket Mocs — were announced as the best in the U.S. "Not only did we break the altitude record for the competition, we were first in every category, in every single thing," says Ashwyn Sam, a senior in mechanical engineering and math, pride practically beaming out in streaks of light from his words.

For the Students for the Exploration and Development of Space Rocketry Contest, those categories include research papers and computational mathematics written prior to launch, design and post-launch reports, videos of the launch, documenting the velocity and altitude of the rocket and — perhaps most importantly — having the rocket in hand after it lands. But Phoenix was lost in the sawgrass and muck of a swamp, a little over a mile from where it was launched. Without the actual rocket and the data-gathering equipment inside, the team would be out of the running in the rocketry contest, not even considered as a possible winner. "I remember thinking, 'If we don't find this rocket, nobody's gonna know the stuff we went through; nobody's gonna know how hard we worked for this because nobody will believe us," Sam says.

After months of late-night/early morning work sessions, poring over computations and diagrams in mechanical, chemical and electrical engineering; running computer simulations to test the plans, building and rebuilding the three rockets used in the competition, the idea of being stymied at the very end was completely unacceptable. "All of what went into the trip, driving eight hours to get down there, then launching this rocket just to lose it in a swamp was not going to cut it," Pace says. "There was no way we could just give up on it."

Into the Swamp

Standing on the edge of the swamp, however, the team had absolutely no idea where Phoenix had fallen. The GPS device in the plummeting rocket had cut off at 200 feet, seconds before it was swallowed by the brown water. "Four of our team members actually got in the swamp with their tennis shoes, shorts and just T-shirts," Sam says. "This is dangerous. It's sharp grass; the water is up to your chest. We assume there are alligators in there. I mean, it is a swamp in Florida. But we wanted to win it so bad."

Yet the mixture of looming disappointment, creeping worry and never-giveup attitude was just the cherry on the top of an engineering sundae that had been something of a culinary disaster up to that point. Pace was one of the team members



"If we don't find this rocket, nobody's gonna know the stuff we went through"



who plunged into the swamp in the search for Phoenix, forging into water so brown he couldn't see through it. "I honestly wasn't super-concerned," he says. At least until he ran into a fat layer of sticky sludge that floated on top of the water in places, a 3to 4-inch-thick sheet of decaying vegetation that he had to, at times, literally lift his foot out of the water and step on to get through. In places, it behaved almost like a living thing that wanted to encircle him and drag him under, he says. "I walked into it and it actually wrapped around my waist and then came up behind me."

Winning Mindset

Team members first got together in January when professor Trevor Elliott spoke plainly when the six new Rocket Mocs showed up, Sam recalls. "He said, 'If you are to join this team, you must take this seriously and you have to have the mindset of winning first place," the student recalls. "He specifically said, 'We're gonna win first place if you join this team,' and his confidence and his, I guess, tone meant that he was very serious when he said that. I was like, 'OK, I want to be a part of this."

However, right off the bat the team failed. Their first launch, which took place in North Carolina, had mechanical problems and sputtered to about 4,000 feet, nowhere near high enough. "We were all pretty bummed out," Sam says.

More Frustration

The debut rocket took two weeks to build, Sam says, but the second one took only a night. The team was smart enough to carry a second rocket with them to that North Carolina launch. >>



LEFT: Members of the Rockets Mocs are, from left, Ben Shell, Jace Sullivan, Ashwyn Sam, Caleb Pace, Jordan Roberts, Austin Brewer and Dillon Grider, ABOVE: Rocket Mocs in UTC labs.



In San Diego, members of Rocket Mocs were still going over details and documentation for their project just prior to the awards banquet for Students for the Exploration and Development of Space Rocketry Contest, where their No. 1 ranking was announced.

Returning to their hotel, they modified it until about 2 a.m., using what they had learned from the first failure.

At 7:30 the next morning, they headed out to the launching field, full of cautious optimism. That didn't last long. The computer brain of the second rocket "was glitching" from the getgo, Sam says, and it failed, too. This time, the team went from "bummed" to "devastated," he says. They were packing up to head home when Sam, after reading through the computer's instruction manual, discovered a possible solution for the rocket's brain. "I was like, 'Guys, wait. Just one more thing. Let's try it." So they tried, making the adjustments and placing the rocket on the launch pad again. "We all were so excited and like, 'This is gonna work," Sam says. But it didn't. In fact, it did worse than the previous launch. "Everything just shattered," he recalls.

Back to basics. Back home. Back to late nights. Back to cautious optimism but, this time, tempered with genuine worry. "Time was running out," Pace says. The team decided at the last minute to head to Tampa the following weekend no matter what happened.

A Shred of Hope

After a day roaming around the swamp near Tampa, the team was still empty-handed; Phoenix was still floating — or sunk — out in the wild. With no GPS, finding the rocket was pretty much a matter of chancing across it by luck. That was never going to work. But giving up wasn't an option either. Elliott, still at home in Chattanooga, started trying to track down the man who originally created the GPS unit, eventually finding him in Colorado. Elliott gave the team the man's home phone number and, while he could not use his personal equipment to help track Phoenix, he did have an idea of how they might be able to find it. "When I called them to give them the info for the guy that made the GPS tracking system, after I hung up with them I actually prayed that they would find it because they deserved it," Elliott says. Possibilities in hand and heart, the team went out that night and bought a drone with a camera. About 2 in the morning, some of them were out in the hotel parking lot, learning how to fly it.

At the same time inside the hotel room, others pulled out pencils and calculators and revved up their math skills. They had the coordinates from the rocket GPS' last signal at 200 feet plus the video they had taken of the launch and descent. "So, based on the wind speed, based on how high it is, based on how fast it's going up and down, its vertical velocity, horizontal velocity, we did the math and we created our own path," Sam says. "We learned the power of a little shred of hope."

The next morning the team stopped by a local fishing store and bought some waders then, with equipment and

equations in hand, they faced the swamp for the second day. Eventually, Sullivan and Pace volunteered, although Sullivan admits it wasn't an easy decision until he considered the future. "I knew I would regret it for the rest of my life, for the next 60, 70 years, if I didn't go look one more time for this rocket because this rocket meant so much to all of us," he says.

Alligators, snakes and other dangers never left his mind, he says, but he pushed past them. Hopes for the camera-carrying drone were dashed when they discovered there were too many trees in the way. But video was a necessary part of the package to be handed over to contest judges, so Sullivan held a video camera while Pace carried a phone that connected back to Sam, who was standing on the shore, using the equations to tell them, "Go 15 feet to your left" or "Turn to your right and head 10 feet." And it worked.

"It was exactly where we calculated it to be. On the spot," Sam says. "It was like life was pushing us to see how much, how far we could go." Still, the team was not out of the water yet.

The Quiet Beep

Recording the rocket's ultimate height is the role of a device that sends out a series of beeps that can be translated into real numbers. Trouble is, like the GPS, the Phoenix's beeper had been underwater for more than 24 hours. And when the rocket was carried to dry land, it was not working. "That's a huge problem. It has to beep for us to win this," Sam says. After letting the rocket dry out for a while, they tried again, this time inside a car to prevent outside noise from drowning out the beep. "Pin-drop silence, yeah," Sam remembers. "No one's even breathing at this point. We want to make sure we hear the beeps. This is super-silent." Everyone has their head down near the rocket, listening, waiting, hoping, sweating. Then the beeps emerge. Not loud, but loud enough. "It went from super-silence to everyone starts yelling; the car starts shaking; the people outside probably thought we were crazy," Sam says. "But we got it."

STREETSMART PROJECT

Mina Sartipi, Students Work with the City to Create a Better Urban Environment

> Terrell Torrence and a traffic sensor on MLK Smart Corridor

By MEGAN SHADRICK **Terrell** Torrence was working at Uncle Larry's on M.L.

King Boulevard in Chattanooga the day a woman was struck by a car outside the restaurant. "She's now on a walker," says Torrence, son of Uncle Larry's restaurant owner Larry Torrence.

There are around 100 pedestrian-involved crashes every year in Chattanooga, and the number of fatalities in those incidents more than tripled in 2018 to seven, which is more than all three prior years combined.

UTC College of Engineering and UC Foundation Professor Mina Sartipi is trying to reduce that number and is using M.L. King Boulevard as a starting line.

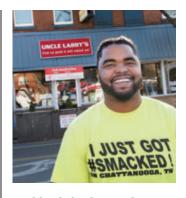
Part of Chattanooga's Smart City concept, Sartipi and other researchers have turned the busy downtown thoroughfare into a test bed of sorts. They have added air pollution and motion sensors, microphones, cameras and solar panels on 16 poles along M.L. King Boulevard to collect different types of data.

The collected information includes keeping track of how many people walk on the street, where they walk, when and how traffic moves and where common accidents occur. The data is so precise, it tracks the time of day and where the sun would be at any given time to better understand the larger issues at play. "This corridor can help us understand how pedestrians are using our city transportation networks and prioritize deployments and additional research opportunities that will address our city's goals," Sartipi says.

With a bike/car share station, a bike lane, an electric-vehicle charging station and a regular route for city buses, the research stretch—dubbed the "MLK Smart Corridor"—"represents a small version of a real urban environment," says Sartipi. "By studying mobility, air quality, health and energy-related projects in this corridor, we can learn a lot about the project's real settings."

In the spring of 2018, Chattanooga made changes along the MLK Smart Corridor by reducing traffic lanes from two to one. A bike lane also was added, which has made it much friendlier to pedestrians and cyclists. Because of the way it was built, the MLK Smart Corridor can easily be augmented with additional sensors and programming capabilities. "By making it userfriendly and remotely accessible, our goal is more researchers use the testbed for Smart City projects," Sartipi explains.

Also serving as director of the UTC-based Center for Urban Informatics and Progress, Sartipi is one of the





worldwide leaders in the Smart City concept. In Chattanooga, it's an effort to use the city's 10-gigabit fiber-optics network to, among other things, better control traffic flow with traffic signals, manage streetlights to make streets safer and bring more efficiency to city services.

Along with the Center for Urban Informatics and Progress (CUIP), the Smart City initiative includes EPB, the Chattanooga Department of Transportation and City Council, the Enterprise Center and others.

Andrew Rodgers, director of research and applications strategy for the Enterprise Center, says this has truly been a collaborative initiative. "It has been a community project. The university and city certainly couldn't have done it on their own. It's about finding those things that have common outcomes and supporting the research that drives the outcomes everyone is interested in."

UTC students were essential in helping install the sensors, and they also will be deciphering the data gained from them. Jose Stovall, who is earning a master's in data science at UTC, worked on the project for two years in preparation for its installation on M.L. King Boulevard. "I've gained a lot of confidence," he says. "It's not a question if we can fix it—it's how I'm going to fix it."

The Smart City partners began the MLK project by holding a town hall meeting with the MLK neighborhood and business owners to explain what was happening, how it would be useful to them and answer any questions. "We were very appreciative that they asked and had the meeting here, knowing they cared enough to do it meant a lot," Torrence says.

He hopes the research will help the city and the MLK community to attract more businesses while making the entire area safer. "The thing is, we need that," he says. "Anything that comes to this street that is new and innovative is a good thing."

STUDENT-RUN **SMILE FUND SEEKS PROMINENCE**

All-Undergraduate UTC Team Captures First-Round Americas-Level Competition



What attracted you to UTC?

SHANE COTRISS

I couldn't get an education at this level for this cost anywhere else. I came back for my MBA because I wanted to grow with the university. I've really appreciated my time here at UTC, and I hope to show that by giving back as much as I can.

What is the best experience you've had at UTC?

Through the SMILE Fund, I've discovered that I love teaching. On Tuesdays, SMILE Fund team members hold a small class meeting, and it is very rewarding for me to teach them and see a lot of students who haven't even had their first finance class vet take this information and run with it.





By Gina Stafford

When it comes to experiential learning, Hunter

Holzhauer wants the SMILE Fund to be in a class by itself. The SMILE Fund—Student Managed Investment Learning Experience—began in 2015 with a mission to teach portfolio management, investment strategies and equity valuation all while growing its \$250,000 starting endowment. Holzhauer, the UC Foundation associate professor who oversees the SMILE Fund program, puts the mission more simply: "Be the best student-managed fund in the world."

"We're not there yet, but we can be, and the students are realizing the degree of work involved in the climb," Holzhauer says. "Which is an important part of what they're learning and what I tell them: A lot of success in life is really about hard work. I'll work alongside these students for as long as it takes, so long as they're putting in the effort.

"It's brought me the proudest and most awed moments of my career, including seeing former student participants become alumni and returning to pay it forward. They know how it feels to be in the students' shoes. There's a sense of wanting to give back, of being part of a family, of a band of brothers and sisters who share a strong bond as a result of their shared experience."



Perusing Applicants

That experience begins with a serious interview process. Students have to apply for consideration, submitting resumes that are screened and reviewed to determine which students will advance to face a panel interview. Successful applicants enter at the "analyst" level to become part of the 35-member student organization headed by seven student officers who oversee teams of analysts assigned to 10 economic market sectors.

Participants get one credit hour per semester, for a maximum of three credit hours earned over three semesters. In the first semester, students are trained. The next semester, they are active participants. In the third semester, participants train their successors. At all times, the rotating team includes experienced members, even though there is 100 percent turnover every year at all positions, Holzhauer says.

"They sign a contract. It says, 'Here

are your responsibilities. This is what you commit to do.' It's about a 10 to 20 hours a week commitment for them. For the officers, maybe 40 hours a week. Some also have paying jobs in addition to this and going to their classes. These students work incredibly hard," he says.

"The experienced students see themselves in the new class coming in. They are motivated to pay it forward, and the peer-to-peer teaching is unbelievable. They actually hold their own class every Tuesday where the more-experienced members of the class teach the lessknowledgeable ones," adds Holzhauer.

Student-Run Business

UTC's SMILE isn't the first studentmanaged fund Holzhauer has started. At a previous career stop, Penn State University's Erie, Pennsylvania campus, Holzhauer used a donor's \$100,000 gift to get a program established. From that experience, he says he "learned a

lot about how a student-managed fund works and how it could be done better."

"Some of what makes the SMILE Fund at UTC unique to anywhere in the country is that it's not a class and it's not a club. It's a business. The UC Foundation is the client and we manage that fulltime," Holzhauer says.

"What's really unique is that it's the only student-managed fund in the country that involves freshmen. We keep them and train them. That allows me time to teach and develop them so that, by time they are juniors and seniors, they know what they need to."

Such as?

"We talk a lot about value," he says. "If you learn how to value a company, you can learn how to add value to a company. Knowing that puts you way better off and enables you to speak a language that makes you sound more valuable. If you have a skill that makes you an asset, a company can value you, and you can tell >>

Without doubt, the SMILE Fund is experiential learning at its finest. Participants' hands-on training and investing decisions prepare them for a future in finance.

a story that makes your value obvious to a company.

"Finance can be a tough field to crack, so many students are coming to it without any context. If you major in engineering, you're expecting to become an engineer. Major in journalism, maybe you'll be a journalist. Accounting, an accountant; but major in finance, and what will that make vou? A 'financist?'

"There's no standard template for how to get a job in finance, but I think it's getting easier for some of our students because the quality of hires is selling their successors."

National Competition

SMILE Fund students also are making a name for themselves with their peers. In each of the three years since the program launched, UTC students have competed as a team in the annual Chartered Financial Analyst Investment Research Challenge, or CFA competition. In what Holzhauer calls "the Olympics of what we do," more than 1,000 collegiate teams from 80 countries around the world compete in research and analysis of actual companies.

UTC students had never won even a regional competition before 2015. They lost by one point to a team of Belmont University graduate students in 2016. The next year, the

SMILE Fund team won the regional level for the first time in UTC history and went on to the Americas-level competition in Seattle. In 2018, their third year of competition, SMILE Fund students won the regional level again and went on to a history-making first-round win at the Americas level.

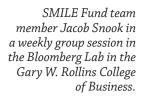
UTC students made up the only team of all undergraduates among the final five teams. At that level, student presentations and the question-and-answer sessions that follow are live-streamed by Bloomberg Businessweek.

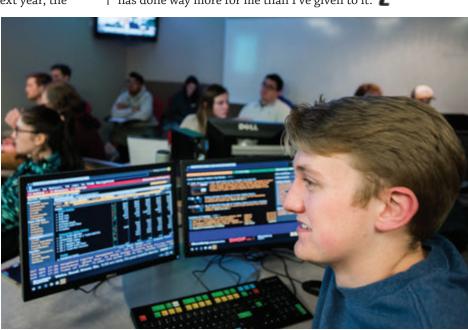
"I think we won in the Q&A, and I'm most proud about that," Holzhauer says.

Meanwhile, he says, he's hearing from high school juniors who've heard about SMILE and are planning to enroll at UTC as a result. They'll face stiff competition from an applicant pool of quality that is "going straight up."

"It started as just something I really believed in wanting to make this the most elite program at UTC—and I'd be amazed if there's this kind of interaction with faculty and students elsewhere," Holzhauer says. "I've added a ton of experiential learning to all my classes, but nothing can compare to this.

"It's changed the way I teach, and I feel the SMILE Fund has done way more for me than I've given to it." 🗲





A BUG'S (URBAN) LIFE

Cicadas Are Good Indicators of Environmental Quality

By Sarah Joyner

DeAnna Beasley studies bugs.

Assistant professor in the biology, geology and environmental science department, she is learning what makes city-dwelling insects like ants and cicadas different from their forest-dwelling counterparts.

Do they eat different food? Are they smaller?
Beasley asks these kinds of questions
because she wants to know how human activity—
obviously more present in the city—affects
insects and how species of bugs are adapting
to environmental changes taking place in their
urban homes. She is particularly curious about
urban-dwelling cicadas.

Beasley is not the only one at UTC asking these types of questions. Undergraduate student Hannah Hightower has set her sights on cicadas, too. With Beasley as her mentor, Hightower is studying the spread of fungal pathogens in cicada populations. In April, Hightower is sharing her research at UTC's ReSEARCH Dialogues with a seminar, competing in the lightning pitch competition and with a poster presentation.

Her research ties into the bigger picture of how does

urbanization and human disturbance affect insect populations? "It's something that people frequently overlook because cicadas are not cute. They're gross-looking. They're really loud in the summer. No one really cares about them. But they're good indicators of environmental quality," says Hightower.

The cicadas that she studies live about 17 years underground, feeding on the xylem tissue of trees. Xylem tissue pulls water and nutrients from the ground into the tree. Hightower says the trees are like an "environmental straw" to cicadas.

So when the cicadas living underground munch away at tree tissue, they're taking in everything the tree has sucked up from its environment. "All of that will manifest in the

cicada and they sort of serve as biological time capsules," Hightower explains.

After those "biological time capsules" have resurfaced and passed away,
Hightower dissects them, specifically to see what fungus was present in their bodies and how the fungus is being spread. The end goal is to better understand how urbanization is affecting the health of the insects.



utc.edu/cicadas



HANNAH HIGHTOWER

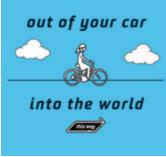
Why UTC? What brought you here?

I transferred to UTC in the summer of 2016 after relocating from Washington, D.C. for work. Every admissions staff member I was in contact with made UTC feel like home well before I even visited campus, and that set the tone for my time in Chattanooga.

COLLABORATIVE CLASS FOR CHATTANOOGA

Professional Practices Art Class Improves Public-Use Bicycles, **Designs Communications Strategy**





Collaboration with the city created a campaign encouraging locals to use alternate transportation in Chattanooga.



By Sarah Joyner

stationed throughout Chattanooga.

When Aggie Toppins, head of the art department, first came

to UTC as a professor, she taught a class for design students called Co-Creations. One of the class projects was about bicycles. Students in the class set their sights on the public-use green-and-blue bikes

No one asked the students why bicycles. Rather, the students asked: "Why aren't people using these?" They began exploring reasons.

First, the students tried out the bikes. They spent an entire class period zipping around local streets with two-wheelers from the city's bike-sharing system. They talked with people on the street about the bikes. Quickly, class members discovered what kept Chattanoogans and visitors from renting bikes: They were kind of heavy, it was said ... and Chattanooga has a lot of hills ... and it can get miserably hot in the middle of summer. "By getting out and asking questions, the class experienced the practical, behavioral matters one might not grasp if you're just looking at a project brief on a piece of paper," Toppins says. She made her class understand: "Go out and experience the problem."

Gaining Client Work

After researching hang-ups to the local bike-sharing system, students designed and created prototypes of materials to address the obstacles, hoping to entice more involvement with city bikes. When the class presented its designs at a local show, City of Chattanooga employees in the audience were impressed.

The following semester, the city's Department of Transportation became the first official client for the third-year design class, now titled Professional Practices. The class spent a spring semester working with Department of Transportation Administrator Blythe Bailey and collaborating with Jenny Park, multi-modal planner for the Regional Planning Agency. Their goal? Create a well-designed communications strategy for spreading the message of multi-modal (walking, biking, bus) transportation available in Chattanooga. At the end of the semester, students presented a full-brand book titled "ThisWay," an edition complete with ideas for bus-side ads, mobile applications and symbols that could be used for signage.

"I wanted the designers (students) to recognize the depth of the challenge and not just make a logo," Bailey explains. "They really dug deep and even began to understand the differences in challenges

The class taught her a lot about communicating and balancing the needs and wants of a client and an intended audience.



from moving around on foot, bike or bus, depending on the neighborhood and the geography. The work was designed closely in the context of place, and pieces were directed toward particular neighborhoods to better reach specific audiences. The work was sophisticated, thoughtful, and the students showed a genuine interest in the topic," Bailey adds.

Toppins' first semester teaching the Professional Practices course was a success. The Department of Transportation hired a student intern from the course who spent a year implementing several of the designs created by the class. Now taught every spring semester since 2014, the Professional Practices course has continually put students to work with community partner-clients.

Previous semester projects have included a series of posters for a history campaign with the Chattanooga nonprofit Organized for Action, an energy-efficiency campaign with EPB and a project with the local company green | spaces.

National Design

For their most recent project, students from spring 2018 Professional Practices designed all branding materials for the second-largest art and design conference in the U.S., SECAC (formerly the Southeastern College Art Conference). Senior Ashley Prak was a student in the class in 2018 was part of the group that designed all the SECAC materials. Prak says she learned about collaboration and building connections as she worked with classmates to create designs for interior and exterior displays, digital graphics, name tags, merchandise and a program booklet, among other graphic materials.

"Before I took the class, I was aware that it was meant to teach us how design works in a professional setting. But after taking the class, I realized it was more than just that," Prak says.

"Through actual practice, I learned how to apply my own strengths to certain responsibilities in collaborative work and how to maintain balance when working with others. I was able to learn from my colleagues and engage with them in areas I felt I lacked satisfactory knowledge. The most rewarding part of the class was how well our work came together at the end, seeing the result of our collective efforts."

Under the tutelage of Mark Cooley (Toppins had Cooley direct the 2019 class), design students are creating materials for the local nonprofit Causeway. They're partnering with

Chelsea Conrad '13, creative director at Causeway. Conrad took the art design class when she was a student at UTC. Although there are still many similarities, there is one big difference between the class Conrad took and the class she is partnering with now—a real-world client.

"I was in the last Professional Practices class that was taught before Aggie Toppins took over," says Conrad. "I speak to her class most years now, and I am always envious that they are getting to research and work with real-world clients. However, the class was still beneficial for me. We were divided into groups, and each student created a brand for a fictional dog-grooming business with a specific audience assigned, and our professors posed as the client," Conrad explains.

The class gave her a chance to hone and test her design skills, but it also taught her a lot about communicating and balancing the needs and wants of a client and an intended audience, a useful skill even in her current job. "It was the first time that I had to consider an audience that was not myself. It didn't matter if I liked the work. What mattered was communicating successfully to the target audience." She adds, "It's your job as a designer to navigate the client relationship and figure out what to stand up for and which things to bend on so the client is satisfied with the final product."

Beyond the Classroom

So what makes this class so special?

Students work with real clients; the work is more than theoretical; and the work goes beyond the walls of the Fine Arts Center, becoming greatly experiential, according to Toppins. She adds, "When we do these experiential-learning projects with our design students, the emphasis isn't just on making something pretty or making something personally fulfilling, but actually working toward impact.

"The students aren't just making a brochure because their client wants one. They determine the problem and need, ask questions, do the necessary research and then design a response.

"Art is inherently experiential. It's never a process of memorizing facts or regurgitating the right answer. It's always a process of synthesizing the things you're learning into a process of making."

THE HEALING TOUCH OF A FRESH HAIRCUT

UTC Freshman Felix Gould Develops an Outreach Program



By Shawn Ryan

Corey, a homeless man, sits in the chair, a barber's apron draped across him. Behind him, hairstylist Chelsea, volunteering her time,

stands with electric clippers in hand.

Corey's hair is a thick mass that rises up some three inches from his head, but he doesn't want her to touch that. He just wants his beard trimmed nice and neat. "I can't keep the females off me," he says with a smile.

His friend Tony Talley walks up while Corey is in the chair. "Give him a Mohawk or something," Talley says. "Make him look pretty."

Whether Corey—who doesn't want his last named used—is pretty and irresistible is a personal call, but for him it's all good because the trim was free. "I got to save my money that I was going to spend to get it, so it helped me out a lot," he says.

Money is a big issue for Corey, like it is for most of the people hanging out in the Chattanooga Community Kitchen. But Felix Gould, a freshman in biology at UTC, knows about

"I realize how much of a toll not having a simple thing such as a haircut can have on a person."

money issues and has created a program to help the homeless.

On the first Friday of each month, hairstylists go to the Community Kitchen on 11th Street in Chattanooga to cut hair for free. A couple of weeks ago, three hairstylists from Bridge Salon on the city's North Shore were cutting hair and trimming beards and mustaches. Gould's efforts launched the program. "I came from a poor family in Connecticut and regular haircuts were never really in my life," Gould says. "I realize how much of a toll not having a simple thing such as a haircut can have on a person."

At the Community Kitchen, some of the men talk and joke and laugh while their haircut is taking place; others sit stonily quiet, eyes down. Before coming to Chattanooga, Bridge Salon Owner Teresa Wesson cut hair at the homeless shelter in Knoxville and understands the power of the simple act. "I saw what an impact it had on desperation," she says. "It changes their whole demeanor, at least temporarily. I've noticed it gives them incentive to try and go interview for a job because they're more presentable; they don't look beat down, disheveled and ashamed."

A job interview is why Paul got his hair cut, which had gone about four months without a trim. "It was pretty scraggly," he admits. "Getting it cut definitely makes you feel a lot better about yourself."

Gould came up with the idea while talking to Wesson while getting a haircut at Bridge Salon. "Walking out of there that

day, I didn't think much of what I said, but then I got home and looked in the mirror at my haircut, and I loved what she was able to do," Gould says. "So I called Teresa and asked if she would join me in this pursuit and she said 'Yes.'"

Wesson says she participates for a couple of reasons. One is a kind of payback for her "rewarding" career. The other is the reaction of the homeless men. "The smiles that it brings and the way I see a lot of these people light up when they look in a mirror," Wesson says. "It's just very humbling. That's probably the biggest thing it does for me. It humbles me, makes me very appreciative and grateful."

In October, Wesson was the only hairstylist available one Friday, and she was able to give about seven haircuts, Gould says, but he knew immediately that his efforts to organize the program were worthwhile. "I knew it would be needed, but afterwards every single person who got their hair cut came up to me and thanked me and shook my hand." Even with three hairstylists participating in November, only men have come to get haircuts, but the ultimate goal is to add women and children, he says.

The first couple of times were "a little bit sad because a lot of people just got buzz cuts, and I think they did that thinking the program was not going to keep going," Gould says. "I hope that, as the months proceed, they realize that this is going to continue and you can do what you want, not what you have to do."



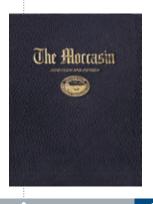
FELIX GOULD What attracted you to UTC in the first place? I came to UTC to be closer to my mother, which has also been a nice change of pace (socially) from where I came.

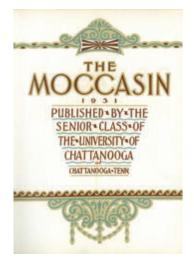
What is the best experience you've had at UTC?

The best thing about UTC, and the reason it has been exciting for me, is the sense of community that the UTC campus has. There are so many activities to take part in, and so many clubs to be a part of, it makes for a great time to find yourself and what interests you in life.

FROM THE **ARCHIVES**

No matter where in life we roam, cross desert sands or ocean foam, our hearts shall always hold as home Chattanooga Varsity.

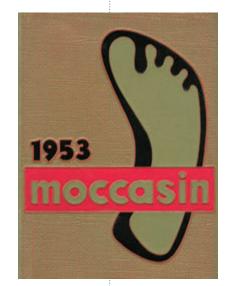




The Moccasin inside page 6

New and old students were welcomed, and although Korea was always in our thinking, studies, chapel, laboratory work, drill and gym consumed most of the scheduled time.

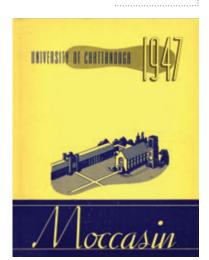
1953





1921

History of the Class of 1921. At the beginning of our sophomore year, we found that our ranks were somewhat depleted. Many of us had entered the army or were in other branches of war work.



Along with stepped-up social functions, the parties, the formals, the full-tobustin' classrooms, the zest in sports programs that has marked the return of the GIs to UC, the revival of another old custom, the annual is the first to be published since 1941.

Special Collections: Moccasin Yearbooks

By Noah Lasley University Archivist

Special Collections is the University of Tennessee at Chattanooga's archival repository and institutional memory. Open to the public, we acquire, preserve and provide access to manuscripts, records, photographs and rare books that document Chattanooga and the history of the university.

The Moccasin yearbooks, featured above, are an example of the kind of popular resources that Special Collections makes available online through our

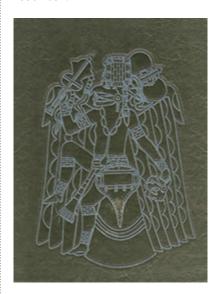
1991

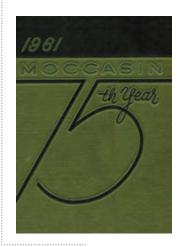
The year 1970 witnessed the birth of a new university. On July 1, 1969, University of Chattanooga became the University of Tennessee at Chattanooga.

The student sees a world that is torn by wars, a country that is split by patriotism, the desire for peace, a state that is totalitarian, a city that is troubled by racial strife and a community that is trying to live in harmony—black and white, red neck and unshaven.



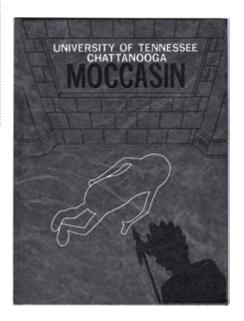
Trying to cover a year in which Milli Vanilli was stripped of its Grammy and Hussein was stripped of Kuwait is no easy task. But this book—with all its shortcomings, with its limited scope, wih all those black pages—seems to be a more or less accurate reflection of life at UTC in 1990-1991.





Kicking the old habit of apathy, the UTC student body turned their attention to another "A" word. No, not academics or athletics or even adultery. Apartheid.

1989



Seventy-five years of countless students "entered to learn-left to serve." For decades in the future, students will come for this same purpose. It is to these we dedicate the 1961 Moccasin.

digitization efforts. Online access makes these historic yearbooks one of the best starting points for those interested in researching our university's history. In addition to page after page of student portraits (which, taken alone, are great for glimpsing changing hairstyles and fashions through the decades), the Moccasin features snapshots and written descriptions of campus happenings that mattered most to each class. The biggest appeal of this collection is the way it tells the story of the university from a uniquely student perspective. To see the Moccasin yearbooks and more visit:



MANY LESSONS LEARNED STUDYING ABROAD



By Sarah Joyner

Emilv Wilson stands at the

counter of the cafe mixing flour with other ingredients, steadily kneading the dough for chapati, a flatbread popular in Limuru, an ancient town in Kenya, East Africa. She carefully follows the instructions recently taught to her by the cafe's owner, Esther. Nearby, Esther stirs ingredients in a large iron pot cooking over an open fire. Two UTC students take notes in the back. As Linda

Frost, dean of the Honors College, stands just inside the cafe's door soaking in

> this scene, Esther turns to her. "You should see her (pointing to Emily) break wood," Esther says. Emily leaves her breadmaking and heads to a pile of wood in the corner where she starts breaking the wood over her knee to feed the small kitchen fire.

Soon after, Paul, the owner of a tuk-tuk company (tuk-tuks are known worldwide mostly as various forms of taxis) in Limuru, arrives at the cafe. He brings three UTC students riding along in his three-wheel taxi adjoined to a motorcycle. Everyone meets to share chapati and tea inside the cafe. It becomes a quiet, reflective place during what has been a whirlwind trip abroad for UTC students and

faculty alike. Although they aren't in the middle of an African safari or wandering an open-air market in Nairobi, this is the memory that sticks out in Frost's head. It is genuine. "It's these moments where you as a traveler do not feel so distinctly out of the culture," she says. "You have moments where you feel just a little bit included. Those are the powerful moments." During summer 2018, the Honors College and Gary W. Rollins College of Business partnered to take students on a 3½-week trip to Kenya.

Through the faculty-led experiences, students studied social entrepreneurship. They went on safaris, visited an elephant orphanage, toured the United Nations Human Settlements and collaborated with Care for AIDS, a Kenyanborn nonprofit empowering people to live after an HIV-positive diagnosis. Through Care for AIDS, UTC students teamed up with HIVpositive small business owners like Esther and Paul. The students had a glimpse of what life was like for these small-business owners in a developing economy and a culture where HIVpositive status is stigmatized.

"Throughout the trip, we as faculty leaders emphasized to the students that they were not there as business consultants, but rather to walk alongside the entrepreneurs to navigate new ways of thinking about their businesses," explains Jessica Auchter, UC Foundation assistant professor of political science. She says the experience was fruitful for both students and Kenyan entrepreneurs. "For many of the entrepreneurs, having someone from outside of their community come in and help them think through their business was a strong self-esteem booster for their own entrepreneurship. Many of these individuals have struggled with their diagnosis and feelings of self-worth. Care for AIDS, the organization we worked with there, focuses on building capacity, including entrepreneurship training, skills training, spiritual counseling and medical support (to help them gain access to the free antiretroviral drugs that the Kenyan government provides). We were extremely lucky to be able to play a small role in this larger effort to support the entrepreneur (effort) that already is underway in Kenya."

During his time in Kenya, business management major Wyatt Branch got to know Paul and his tuk-tuk business. "I learned a lot from Paul," Branch says. "The mentality that Paul brings to work every day was

WILL PATTERSON What attracted you to UTC in the first place? The moment I stepped

foot on campus, I knew UTC was for me. UTC is not too big or small and offers a city lifestyle without the stress; it's the best of both worlds. I truly could not ask for a better college experience.

inspiring. A 65-year-old man with HIV in Limuru simply does not stand much of a chance. However, Paul sees every day as a blessing and refuses to ever have a down day." This experience, and getting thrown out of his comfort zone, taught him about growing a business, but even more, taught him how to 'adapt to situations on the fly,' which is a genuinely important life skill," Branch says.

Kenya isn't the only destination used as an experiential classroom by UTC students. In recent years, the university has seen a rise in students studying abroad. International studies major Will Patterson joined the anthropology, sociology and criminal justice department's faculty-led trip to China last summer. Students on that trip tailored the experience to study their interests such as fashion, dancing, urban development. Patterson focused on social interactions and personal space. He recalls an interaction that still sticks out to him the most, an event that took place when the group was traveling by train to Qufu, the birthplace of Confucius.

"A little kid maybe six or seven with a big smile came up to my seat and started to bring us all manner of candy and snacks," he says. "We would eat them and give him a thumbs up in approval; he would laugh and laugh. We could all see his mother laughing farther down the aisle, encouraging the little guy to keep going. Next thing we knew he brought his tablet over and taught us how to play his English-learning games. Not knowing much Mandarin, this interaction was so special because we didn't need to know the language to communicate and have fun. We saw that laughter becomes the ultimate universal language."

The Chinese make the most of space, a precious commodity in a country of 1.38 billion. "The Chinese culture is truly a champion of efficiency," Patterson adds.

The experiential learning that takes place with experiences like these is invaluable, says Auchter, who facilitated the trip to Kenya. "The trip gave students unprecedented access to a community partnership that they would never be able to have in a traditional classroom setting. As much as we can talk about things in the classroom, students learn by doing."

Top: While studying in Spain, Emily Gaylor balanced days in class and exciting evenings in Barcelona, with its late-evening tapas and bustling streets. Center: Emily Wilson got up close and personal with giraffes at a conservation center in Kenya. Bottom: Paul (center), the owner of a small tuk-tuk business in Limuru, Kenya, inspired Wyatt Branch (left) with his drive and daily optimism.









EXPERIENTIAL LEARNING FOR HIGH-IMPACT **TEACHING**

Soddy Slime Project Earns Elementary School Grant Dollars from UTC's Walker Center



By Gina Stafford

Magnetic slime and high-impact practices: They can go together like parental involvement and successful schoolchildren.

As an educator who prepares educators of the future, Krysta Murillo challenges her students to propose novel approaches to engaging pupils and their parents. Their proposal to bring the novelty of magnetic slime and a few other engaging displays—to an elementary school community event won high-impact practices grant funding from UTC's Walker Center for Teaching and Learning.

Murillo, a member of the UTC School of Education faculty, was part of a group of faculty engaged by the Walker Center to develop courses for the ThinkAchieve, a platform implemented in 2013 to formalize UTC's distinctive focus on experiential learning.

The goal for Murillo and her education colleagues in the group was "making courses that work outside the classroom."

"In education, we always grapple with the challenge of connecting theory to practice. That's why we do a field component," she says. "And in my course, Home, School and Community Partnerships, it's not enough for students just to sign up for placement (in a school setting). I wanted students not only to observe and take notes on what teachers are doing to engage families and communities, I wanted them to be tasked with planning a community-engagement event and to realize the amount of planning and effort that involves.

"The idea is to also learn what teachers, principals and administrators do to develop productive relationships with parents and how those relationships function between teachers, administrators and families."

Murillo structured the course syllabus to incorporate communityevent planning along with standard field experience and observations. Students considered challenges to making families feel welcome at neighborhood schools and welcome to support their children. Just a few among those challenges are parental intimidation about visiting schools, uncertainty about making suggestions or asking questions of teachers and doubt in the value of participation.

"I talked to my students about what successful existing schools do outside the classroom, which generally includes letting your guard down and having real conversations with parents and families. If administrators are well-supported by staff, and teachers feel well-supported in reaching out to families, you can feel a good climate when you walk in the door, and school climate is a huge part of family engagement. I wanted them to see a good model." Murillo found a good model in Soddy Elementary School in Hamilton County. "The school principal, Kim Roden, is remarkable," Murillo says. "She greets all the families by their names. She gives hugs and high fives to the kids. She is very engaging and warm and is a great example to our students."

Magnetic Slime Recipe

½ cup white school glue ½ - 1 tablespoon baking soda ½ - ⅓ cup iron oxide powder 1 tablespoon contact lens solution

- 1. Begin with white school glue in a bowl. Add each ingredient as listed separately and stir until well mixed.
- 2. Knead with hands to form slime. Some liquid will be left in the bowl.
- 3. Use neodymium magnets to play with magnetic slime.
- 4. Store slime in a plastic bag.
- 5. NOTE: Magnetic Slime will leave a removable residue on hands and surfaces.

The school hosts a family night in March and a fall festival, which Murillo's students got involved with in the fall 2018 semester. "I said, 'Let's look at something that can get messy, and that's OK—not highly academic, but just fun," she says. "They came up with ideas for a variety of interactive stations, including making 'magnetic slime."

Magnetic slime—think "slime" as in a thick but malleable substance akin to Silly Putty—changes shape in response to the proximity of a magnet. Ingredients include mostly household products such as liquid starch and school glue, but iron oxide powder is the ingredient that makes it responsive to magnets, which also have to be special, neodymium (rare earth) magnets. Grant funding of \$800 (high-impact practices grants can be up to \$2,000 each) enabled Murillo's students to have materials for magnetic slime, along with seeds, soil, cotton balls, glass jars and a variety of items for everything from "tornado in a jar" to making clouds form.

"They loved it," Murillo says. "The event featured a series of interactive stations and the goal for the stations was to follow a central theme of scientific inquiry—not the scientific method, but something to explore. It was a great experience that went even better than I expected, and it took a lot of effort for the students to plan. They did a great job collaborating on a likeminded goal."

Murillo says her UTC students benefited from firsthand experience in going beyond the traditional role of teacher. The experiential learning design—extensive journaling to assess pre-course assumptions versus postcourse understanding—facilitated

insights into effective engagement with both pupils and their parents.

"For my class, it was essential for them to have this experiential-learning option," Murillo says. "It also helps to demonstrate the presence and value of soft skills in education: learning about themselves and their challenges to being sociable and effectively engaging with parents and families."

While they got the benefit of meeting teachers who enjoy their work, Murillo says her students also served to demonstrate the value of pursuing higher education to a student population that may not receive that message routinely. "I know that the principal is very happy to have UTC students come all the way to Soddy, and we noticed there that not a lot of kids are thinking about or in families being encouraged to go to college. It's really important for Ms. Roden's pupils to see UTC students in her classrooms and to have the opportunity to talk to our students about college."

Roden, in her seventh year as Soddy Elementary principal, agrees. "When we're talking about 'future-ready,' a lot of kids in rural areas don't know about all the possibilities available to them." Roden says Soddy Elementary

takes advantage of UTC's "CK Now! College Knowledge for Now" opportunity for schoolchildren to visit campus and learn about higher-education options.

"That allows them to

cross the dam," she says, referring to the community's location in rural Hamilton County northwest of Chickamauga Lake. "But we have to do all we can in trying to be a futureready district and CK Now! lets our kids know more about what's available, and the UTC students who come here are good examples of what our students can do and could do. The UTC interactive stations were a really big hit, too. We surveyed our students and that activity was their No. 1 favorite, and they definitely want the UTC students to come back."

And if Soddy Elementary officials discover, by their on-site contributions, the capability of Murillo's students such that it helps with their getting hired eventually, that's a happy bonus, she says. "The whole experience has been very rewarding for me. I really enjoyed seeing the students engaged in a different setting, and it solidified my belief that their experience outside the classroom is important."

UTC's Walker Center for Teaching and Learning funds faculty proposals to develop and improve high-impact practices in their courses. High-impact practices, as described by the Association of American Colleges and Universities, focus on specific types of active learning practices that, according to research, is shown to have significant positive effects on student learning outcomes. Active learning refers to a variety of classroom practices used to improve student engagement.

MARKET RESEARCH OPPORTUNITIES

Solution Scholars Benefits UTC Students and Chattanooga Businesses

By Gina Stafford



 $oldsymbol{While}$ it's widely understood that the presence of a university greatly benefits a city, the nature of that benefit can sometimes be difficult to quantify. Not for Beverly Brockman when talking about the mutual benefit of UTC's Solutions Scholars.

"What I think is so wonderful is that there really are two recipients of benefits. Students learn so much, and the community benefits tremendously," says Brockman, head of the Marketing and Entrepreneurship Department in the Gary W. Rollins College of Business. Her department is the home of Opportunity Analysis, the experiential-learning course that is the academic companion to Solutions Scholars and Co., UTC's local business consultancy with paid positions for three undergraduates and three graduate students each semester.

Brockman says the program is a two-pronged approach to mission fulfillment. "Our first and foremost mission is to our students, but we also have an obligation to serve the community. I think the best way that we can approach both of those is to find ways where our students grow as a result of experiences that also help the community. That's what is so exceptional about Solutions Scholars, that it serves both of these populations so well. The students gain fantastic experience. Their skill set from the research side is enriched tremendously by taking advantage of the entrepreneurial environment in which the university operates."

Launched in 2015, Solutions Scholars positions students to conduct market research by teaching them how to identify and evaluate critical business-decision factors conducting that research for real, local clients. "When you think about the entrepreneurial ecosystem here in Chattanooga, we're fortunate that we have a lot going on. There are programs in place to help startups. There are capital sources available if you're growing and really ready to make the big leap. What seems to be missing is assistance for some of these smaller businesses," Brockman says.

"That's where Solutions Scholars fills a gap by meeting a critical need—for the business owners who are supporting themselves, their families and surviving, but they're very busy day-to-day just making things work. They don't have time to learn how to put financials together or the knowledge to conduct some of this research. That UTC can help (in these areas) is a great example of really adding value."

Clients come through the Tennessee Small Business Development Center, a nonprofit based in the Business

Incubator in Chattanooga's North Shore community. Student research includes market characterization, customer profile and demographics, competitive analysis, industry trend analysis, macro-environmental scanning and more. Services are provided without charge to the clients, and student consultants are paid through a UTC grant to TSBDC.

In its first 36 months of existence, Solutions Scholars logged more than 2,300 consulting hours for Chattanoogaarea businesses, leading to \$20.4 million in capital raised by those businesses and 121 jobs created or retained. The 52 client companies included 20 women-owned and 12 minority-owned businesses. "That's the quantitative side," Brockman says. "There's also the other part, the qualitative—the soft skills. That's where students learn how to collaborate with other students, with clients; how to talk with clients; how to share information even when it's not positive; how to guide but not dictate.

"Learning how to be a team player also is a huge part. In recognizing this, one student—a very strong student and more of a Type A personality—told me that, despite lots of group projects, we don't really spend a lot of time teaching them how to be part of a team, how to be a good team leader or a team player. She made the comment that she's much more patient now in working with a team than she used to be."

Liza Soydan, a Chattanooga-based research professional with a strategic business consultancy, teaches the Opportunity Analysis course taken by all Solutions Scholars, undergraduates and graduate students. In a nutshell, she says, her objective is getting students "to understand how you identify quality information to make a capacity-building argument and how you communicate that to others."

Soydan's students are shown "an applied research set of assets" and taught both how to use them and how to discern which tools to use when. "The feedback from students is in the vein of, 'It's like no other class I've ever had," Soydan says. "Like them, I went to a mid-sized public university (in Georgia), but at the time I was one of the few to have a real-life campus job, and that meant everything. It allowed me to launch my career. I was used to working with a team. I was used to clear deadlines and had experience meeting them.

"What I really liked is that it challenged me to apply knowledge from the classroom to real-life problems for real-life clients who have real businesses, or hope to."

"That gave me currency that a lot of other students at that time didn't have. These students—while they understand the requirement to protect client confidentiality—can talk about real experiences with real situations for real businesses in job interviews. That is of tremendous value to employers. And I know these students have skills and abilities that are just pent-up and, if we can unlock that, I think it can be a huge part of economic development for the community and local entrepreneurs. The exchange is valuable, and I know firsthand that the experience is invaluable to a student."

Honors College student Emily Reeves is a UTC Brock Scholar set to graduate in May with a bachelor's degree in marketing. She took Soydan's course in fall 2018 and articulates steps involved in effective business consulting as confidently as a seasoned professional. "You have the consultation. You define the business problem. You conduct the research, and then present the deliverable at the end of the semester," Reeves says. "This course taught me the importance of having a process orientation to help you break down all the factors to consider in developing a solution to a problem. Many students have not had a lot of experience with the ambiguity of the real business world. In class, you get important information and develop knowledge, but it's a more controlled and prescribed environment.

"What I really liked is that it challenged me to apply knowledge from the classroom to real-life problems for real-life clients who have real businesses, or hope to."

Solutions Scholars began as a onestudent pilot project in the form of an

internship and, Brockman says, its success and its clients' needs make the case for further expansion today. "While we strive to have students from throughout campus as much as we can, we want to bring in more students from a variety of academic backgrounds. We definitely want to have more students coming from other colleges.

"We've had an (industrial-organizational psychology) major and undergrads who were business minors. We've had a women's studies major, a computer science major. The MBAs who fill the grad-student positions tend to be broad-based in background. We recognize the need for engineering students, too, and that it could benefit from additional areas of the sciences and other academic fields."

A lot of challenges—the academic calendar and course prerequisites, for starters—factor into growing or changing how Solutions Scholars operates. Making it a more interdisciplinary experience would make it an even more real-world experience, Brockman says, an effort worth overcoming the challenges. "I tend to think that some of the best aspects of experiential education may come from the co-curricular activities," she says, "and when you pull from different disciplines, and you have students bringing very different perspectives and understanding from their classes, it's about bringing out the best in all of them. It's also about learning how to think a little bit differently.

"If we look at it, especially for the undergrads, as the curricular and co-curricular working in tandem, then I think we can really broaden what we're doing for our students, and then it becomes not just the traditional academic model."



EMILY REEVES Why did you choose UTC? I really liked that the campus was smaller and felt so comfortable. I'd been a little overwhelmed by the larger campuses I visited. Also, having to take costs into consideration, being recruited as a Brock Scholar was extremely compelling and definitely closed the deal.

How would you describe the UTC experience? To me, the UTC experience is about the incredibly strong connection the university has to the local community. In my particular case, that also meant discovering there are lots and lots of connections to the entrepreneurial ecosystem and the support of it.

PUTTING ON THE PODCAST

Skills Taught in Class Transfer to the Real World



By Megan Shadrick "It became very personal." That's how Daisja

Lattimore describes her time and connection with students at the Chattanooga School of the Arts and Sciences who walked out of school on the morning of March 24, 2018 to protest school shootings in the United States. Students exited the front of the school and gathered at the entrance.

The walkout included singing, students speaking and 17 white balloons launched with the names of all 17 victims from the Feb. 14 shooting at Parkland High School in Florida. Connecting with the students, hearing their stories and working with them through their process made it "emotional and informative," Lattimore says.

Lattimore, a senior majoring in communications at UTC, created the podcast as a project in the Special Topics: Podcasting course led by instructor Will Davis, outreach manager and producer at WUTC-FM 88.1. She didn't know what to expect in the class, but she knew she enjoyed storytelling and had no desire to be on camera. "I really enjoy talking and having conversations, but I don't like being in front of a camera."

Generally running from 20 to 60 minutes, podcasts are digital audio and video files downloaded from the internet to a smartphone or audio device. Some podcasts are broadcast over the radio.

They often are a series of stories with new details being revealed or discovered during each episode. They cross the spectrum of subjects, from novel-like fiction to personal stories of the podcaster to newsy dives into issues such as immigration, politics, science and others. And that list barely scratches the surface.

Usually, podcasts require a longer time commitment and, even though most are audio-only, they create a more intimate experience than other mediums such as TV. It is estimated that there are over 600,000 podcasts currently with 2,000 being added every week and over 18.7 million episodes.

For her part, Lattimore hopes to continue in podcasting by taking another class from Davis and building off her skills in audio and communication when she graduates from UTC.

But Davis' class is more than just how to create



a podcast. It teaches students how to capture the story, which includes critical thinking, creating and maintaining a schedule and following through with the essential interviews, he says. And, though some students might not think of it, capturing the best sound. "Bad sound gets rejected immediately by your audience," Davis adds.

Unlike videography, where you can have a few visual miscues, our hearing is hyper-sensitive and notices mistakes immediately, according to Davis. This is why it's of utmost importance to learn how to properly handle the microphone, where to place it and how to edit the audio to where it perfectly portrays the story without distracting mistakes. "After this class, students get a



new appreciation for sound," Davis says. "They're better videographers, editors, creators and writers because they've worked closely with sound."

The skills these students are learning make them more marketable in their future careers. Interviewing, time management, critical thinking and interpersonal skills have all been a major point of learning in the podcasting class.

Davis is in his second year teaching podcasting courses at UTC. He's had over 20 years of experience working in radio and has been specifically focused on

podcasts for over 10 years. He has a real passion for the industry while also being a consistent student of the field. "I learn as much as I teach," says Davis.

Felicia McGhee, interim head of the communication department, says "Davis' vast experience in broadcasting provides the students with an instructor who has truly worked in the field. The skills taught in the class are easily transferred to the real world."

Out in the real world, Davis' students recently recorded and produced a series of podcasts called "Stories from the Big 9," which focuses on the history of Chattanooga's East Ninth Street, once known as the Big 9. During its heyday, the street was lined with black-owned businesses and stars such as Bessie Smith and others played its clubs. Ray Charles, Billie Holiday, James Brown, Count Basie, Muddy Waters and B.B. King were known to visit the street after finishing their own concerts at other venues in Chattanooga.

"My students had just 10 weeks to find and research their stories, interview their subjects and produce final versions of their podcast episodes," Davis says. "We heard important stories and made new friends. This project is a great example of learning through experience."

James McKissic, chief operating officer at the Urban League of Chattanooga, says getting younger generations invested in the evolving story of the Big 9, renamed M.L. King Boulevard in 1981, will help keep its history alive. "These podcasts turned out amazing," McKissic says. "I am so grateful to the students and their professor for focusing on such an important piece of Chattanooga's history."

WUTC-FM, the City of Chattanooga and the Urban League partnered for a podcast series highlighting the history of an important Chattanooga boulevard. Called "Stories from the Big 9," the series launched in January. Listen to the series at www.wutc.org.

East Ninth Street has a storied history as the home of much of Chattanooga's African-American culture. Big Nine businesses included the Martin Hotel, which housed many famous black performers, including Ella Fitzgerald, Lena Horne and Nat "King" Cole.

A public launch party was held in January at the Bessie Smith Cultural Center. At the event, several UTC students shared excerpts from their podcasts and talked about what they learned regarding the historic corridor and its important role in Chattanooga's past, present and future. "It's important that we keep the spirit and history of the Big 9 alive," says Chattanooga Mayor Andy Berke. "This is a great chance for young people to tell old stories."

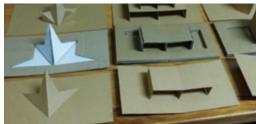
James McKissic, chief operating officer at the Urban League of Chattanooga, says getting younger generations invested in the evolving story of M.L. King Boulevard will help keep its history alive.



RESEARCH **FEAST**

Celebrated ReSEARCH Dialogues Returns





Top: Olivia George, left, has presented projects at ReSEARCH Dialogues in each of the last two years and plans to do so again in 2019. Bottom: Last year, her project was to find ways to create pop-up cards using thick pieces of cardboard instead of the usual cardstock, which is much thinner.

By Shawn Ryan

When Olivia George goes to ReSEARCH Dialogues, she chows

down. "It's intellectual potluck where everyone brings their own dish and you're serving your plates with everything. You have a little bit of your own, but then everyone else's and at the end it's just a really fun meal."

George, a senior in chemical engineering, giggles at her metaphor but immediately adds that, beyond researching her own projects, she always learns something she didn't know at the event. "I feel like there's always stuff at the ReSEARCH Dialogues that I'm like, 'I didn't know this was happening ... at all!' And I feel like I'm really involved, very in touch. Even within engineering, I'm like, 'You're researching that? I didn't know that was happening'."

George has presented three separate projects at each ReSEARCH Dialogues in the past two years and plans on presenting again when the event rolls around in April. In 2018, 442 students presented their research during the event, which started in 2009.

Students who have participated in ReSEARCH Dialogues the "SEARCH" stands for "Scholarship, Engagement, the Arts, Research, Creativity and the Humanities"—say they have always gained something by participating. Either they got better at conducting the actual research for their projects, or they finetuned their ability to present their findings to an audience without freezing up or, through their research, they found ways to improve things out in the real world.

"I would say everyone should do it. Don't be discouraged or afraid," says Hana Karrar, an engineering graduate student who presented her project, Girls in Engineering Network, at last year's ReSEARCH Dialogues. She worked with middle school students at Chattanooga Girls Leadership Academy, researching ways to get girls interested in engineering.

"It ended up going really well and won Best Graduate Research Project, which was a really good experience for me," she says. "The process is challenging, but that's part of the research. It's not going to be smooth. You have to face problems. You have to know how to fix them."

Brooke Epperson, who is enrolled in the School of Nursing's doctor of nursing practice program, will be presenting for the first time in April and says she was inspired to enter the competition after attending it last year as a spectator. "I was super-impressed with the caliber of material that was being presented ... and how enthused everyone was about what they were working on," she says.



Research Dialogues 2018 brought together undergraduate, graduate and faculty to share their research. The two day event last April featured a poster session, Three-Minute Thesis and a Lightning Round. ReSEARCH Dialogues 2019 will take place April 9-10.



utc.edu/research-dialogues



utc.edu/research-video





Top: Each year, ReSEARCH Dialogues brings together undergraduates, graduate students and faculty, who present the findings of various projects they've undertaken in the past year. Center: At the 2018 ReSEARCH Dialogues, Hana Karrar, a graduate student in engineering, explains her project, which looked for the ways to get middle dschool girls interested in engineering. Bottom: Part of goal is to clearly explain your project and what you discovered during your research, as Simar Singh is doing here.

Her project explores ways to give emergency room nurses more tools and guidelines when it comes to working with patients who have behavioral problems. The chance to present at ReSEARCH Dialogues has her "very excited," she says.

Like George, Epperson says seeing other students' projects and talking to them about their research is an added attraction because it could lead to future collaborations. "You get to see what you're doing on your side of the campus and also how things that you're doing can further someone else's project," she says.

Presenting at ReSEARCH Dialogues also is an excellent chance to gain experience at standing in front of an audience and explaining your project clearly, George says, which can carry a student into the future. "Students who are more timid or don't have as much experience, this is a really great opportunity to build that experience, to practice presenting something, then eventually, like me, I fell in love with research and was able to take these skills and go all over the place and different conferences. ReSEARCH Dialogues can get you to a point where you're confident enough to submit your work to a conference that is national or international and see what happens."

UNRESTRAINED **IMAGINATION**

Mechanical Engineering Students Conceptualize and Produce Music Wall



By Shawn Ryan

Larry Westfall

is getting down with his

bad self. A musical mallet in each hand, he pounds ferociously on two tambourines, switches to crash on two cymbals, then switches back to the tambourines. As he does, he starts singing "I Saw the Light."

"That's his favorite song," says McKenzie Brandt, day services manager at the Ooltewah location of Open Arms Care, which works with those who have intellectual disabilities.

Larry, who has Down syndrome, is one of the group's clients and he, like many other clients at the facility, has fallen in love with the Music Wall, a multiinstrumental device conceived, designed and built by four UTC engineering students.

Brandt says that, in the few weeks since the students installed the wall, she hasn't gone a single day without hearing a client playing its instruments. "They're having a blast," she says.

"We want this thing to be used and abused. It will be beaten up, hopefully, for lots of years," says Kevin Finch, a sophomore in mechanical engineering and member of the Music Wall team.

The Music Wall was built by the students—Finch, Matthew Branning, Gary Paradis and Jon Crabtree—as part of the Introduction to Engineering Design class helmed by Cecelia Wigal, UC Foundation professor in mechanical engineering. Students had to choose a project that involved a problem faced by someone with disabilities and design a device to reduce or even alleviate that problem. "We had to stimulate the senses, entertain the users and accommodate the users and to make sound," says Finch.

Wigal has taught the Engineering Design course for more than a decade. It starts off with project proposals from organizations such as Open Arms, Signal Centers and Special Olympics, those who deal with disabled adults. Students then choose from a list of projects that Wigal has compiled. Students must work with the "customer" to understand their needs and come up with a solution. In the case of the Music Wall, whatever the team came up with also had to meet Americans with Disabilities Act requirements.

"We really work hard on trying to think of what

the need is and then the best way to meet that need and don't just think about typical solutions," Wigal says. The ultimate goal of the projects is multi-faceted, she explains. "It's an experiential-based course. They learn the design process; they're learning to work in a team; they're learning how to manage a project; they're learning how to relate to a customer," Wigal says.

The team built the wall from plywood, then covered



it in the multi-colored, interlocking foam squares often seen on playroom floors in daycares and other areas used by young children. "We used foam because it's soft and it has a little bit of texture to it. They can play with it and not hurt themselves," says Branning, a junior in environmental engineering. "I've bumped my head on this a couple of times and, look, I'm fine."

The Music Wall is five feet long and three feet tall and hangs in a hallway in the Open Arms facility. There are 12 cowbells, two triangles, two sets of wind chimes, a wooden xylophone, two tambourines, two cymbals and a steel drum. "We thought about instruments that would be useful on the shape and structure," says Paradis, a sophomore in mechanical engineering. "We agreed on percussion instruments for a couple of reasons. They're pretty low-maintenance. You don't have to tune them. They're pretty durable; they should last a lifetime."

To keep the musical mallets from getting lost, they are attached with cords to PVC pipes cut in half to act as trays. The cords are long enough that every mallet can hit every instrument on the wall, giving players the freedom to indulge their inner musicians.

During one of Wigal's occasional visits to update the



status of the project, it was evident that team members had spent time carefully reflecting and considering how to meet the needs of Open Arms clients when coming up with the Music Wall's design, she says. "The thinking processes they went through, and how they came up with what they did, I thought was very innovative. That's the fun of it, to be surprised to see what they do."

Each of the Music Wall's students play instruments, so they took the Music Wall on several test runs while it was being made and when it was finished. "We jammed a lot on this," Branning says. "It's as loud as we can make it," Finch says.

On the day the Music Wall was installed, Open Arms employees came out of their offices to look at it. The reaction was euphoric.

"That's so cool!"

"That's pure genius!"

"I hope you guys get a good grade on that." Robin Liner, director of day services at Open Arms, had a more emotional reaction. "I just want to cry. I know they're just going to love it," she said, wiping her eyes.

While Larry was finding his musical muse on the tambourine, Liner's daughter, Lori, who also has Down syndrome, was standing next to him, playing the xylophone and wind chimes. And yes, she too was getting down with her bad self.

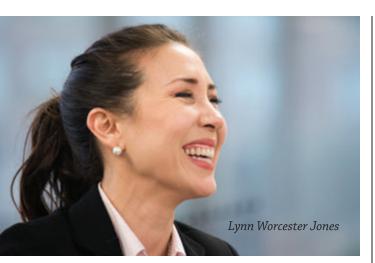


Top: Kevin Finch and Gary Paradis attach their Music Wall project inside the Open Arms Care location in Ooltewah. Bottom: Larry Westfall and Lori Liner, clients of Open Arms Care, enjoy their tryouts on the Music Wall.



SCRAPPY'S KEYBOARDS PROVIDE FREE MUSIC EDUCATION

Piano Lessons for the Underserved and Kids with Neurological Challenges





By Sarah Joyner

Scrappy's Keyboards, a new partnership with the Chattanooga Public Library, provides free piano lessons to local kids.

The Department of Performing Arts' music division recently donated piano keyboards to the library after upgrades to the university piano lab. The keyboards found new homes in the library's sound studio on the fourth floor, but most of them sit nestled in an alcove of the second, children's-only floor.

Two free piano classes meet once a week to teach the fundamentals of music making to kids. On Tuesday nights, the class taught by Martha Summa-Chadwick '96 is an inclusive class; it teaches kids with neurological challenges and more traditional students in one setting. The Thursday night class



is led by Lynn Worcester Jones, assistant professor and keyboard area coordinator at UTC. Both volunteer teachers are assisted by teaching assistant interns and music majors Autumn Skiles and Lindsay Betts.

Nikolasa Tejero, associate professor of music theory and applied clarinet, is the driving force behind the keyboard donation and Scrappy's Keyboards program. This isn't the first time she's facilitated a partnership between UTC and the public library. After the success of her program, Symphonic Tales, an event which began in 2014 and brings storytime alive with area musicians and games for local preschoolers and library patrons, Tejero says she began brainstorming more ways to bring music education to kids in underserved populations. She felt a strong need for more community access to free music education and knew the local library would be a natural fit.

The young students spend eight weeks developing piano skills and exploring their talents in music-making as they follow curriculum curated by the volunteer teachers, Worcester and Summa-Chadwick.

"These are for the most part, beginners ... so these classes are geared for beginners. You're not required to have any special skills when you show up, but you're guaranteed to have a few when you leave," Tejero explains.



utc.edu/scrappys-keyboards



Tejero felt a strong need for more community access to free music education and knew the local library would be a natural fit.



LIVING TO LEARN

Engineering/Computer Science and Business Students Benefit from Living-Learning Communities, Which Assist Learning



Students interested in participating in the residential college program must apply and meet basic requirements which include already having extracurricular involvement, two letters of recommendation, a resumé, work experience, an essay or video submission and prior leadership experience. Students will be chosen after a Skype interview and will be chosen based on several factors, including their ACT/ SAT scores and GPA. The college will pick up to 20 students who meet their highest standards for each academic year.

By Megan Shadrick

The College of Engineering and Computer Science and the Gary W. Rollins College of Business are teaming up with the Department of Housing and Residential Life to create what they call residential

Through residential colleges, students get to know each other and often take the same courses, giving them a better chance to succeed through the sharing of knowledge. Each student from the College of Business who is in the program receives a \$4,000-peryear scholarship.

colleges, which enable students in the same college to live in the same campus housing.

The four-year residential colleges program also enables students to create personal connections that will be enriching and will provide a sense of belonging. Ultimately, the program prepares them to be "successful and visionary leaders," says Abeer Mustafa, associate vice chancellor for student affairs. "Students who enter the program together enrich their learning and provide an opportunity for social and emotional support."

Conversation about residential colleges moved the idea to the forefront when the Housing and Residence Life staff reached out to Robert Dooley, dean of the College of Business, a fan of the idea who has helped get the program underway.

In addition to students in residential colleges having an immediate, built-in community of their peers who are studying much the same courses, they receive an enhanced curriculum along with professional development and career preparation opportunities. Peer-to-peer mentoring is an added plus, with juniors and seniors helping freshmen and sophomores deal with their first years of college.

A UTC faculty member will live alongside the students to help them meet their goals by teaching students their strengths and skills and how to overcome obstacles.

Living Learning Community

Living Learning Communities are residential colleges with a one-year commitment for freshmen. The communities create an environment for students to learn in the classroom and in their housing units. Students are grouped together based on majors and are required to take one course focusing on their living community. Several students who participated in the program say they would have loved to be part of the residential colleges. "You live with these people who are like-minded business majors. It's obviously a perk," says Jordan Camp, a sophomore business major. He hopes to continue his education at UTC following completion of a bachelor's degree pursuing a master's in business administration.

Jeremy Roberts, a sophomore in mechanical engineering, thinks residential colleges are a great opportunity for the right student. "The CECS class I took showed me many different clubs, organizations and other opportunities that I would not have known about if it was not for the class. It also introduced me to different skills that I didn't realize I could improve on for my professional future," says Roberts, who realized that being a part of this group helped him meet and work with many engineering majors.

Katelyn Alexander, a junior accounting major, sums it up this way: "Who wouldn't want to live next to their best friends who can help them with homework for the next four years?" [



living-learning Residential Communities

Gary W. Rollins College of Business



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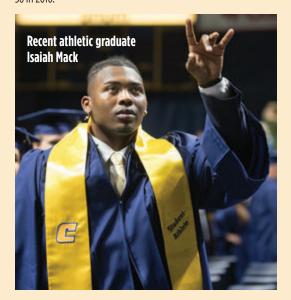
> College of Engineering and Computer Science



RUMBAUGH.

Mocs Set School Record, 40 Named to Fall Academic All-SoCon Team

The University of Tennessee at Chattanooga Athletics Department had a fantastic academic showing in the 2018 fall semester. The department set a new program record with 40 student-athletes earning a spot on the fall Academic All-Southern Conference team. The Mocs' previous high for representatives on the fall team was 36 in 2010.



In addition to the all-academic honors, UTC student-athletes posted a school-record 3.137 average GPA for fall semester 2018. The accomplishment marks the ninth time they have hit a 3.0 or higher GPA in a semester, all within the last five years. In fall, they also set new records with 166 students on the Dean's List and 201 on the Athletic Department Honor Roll.

On the Academic All-Southern Conference team, UTC led the league with five 4.0 GPAs among the 354 team members in the SoCon. Cross country had three 4.0s, including juniors Abby Bateman (marketing) and Julia Henderson (accounting) and sophomore Sophia Neglia (chemistry). Soccer senior Catherine Meyer (psychology) and volleyball sophomore Megan Kaufman (nursing) were also recognized for 4.0s.

Football and soccer led the way with 10 honorees each. Soccer tied a program high for the second year in a row, while football equaled its program-best number, set in 2009. Women's cross country set a team record with nine honorees, while the men's team had four make the academic squad. The volleyball program tied for its second-best showing with seven honorees.

For a full list of the entire 2018 Fall Academic All-SoCon Team, go to: UTC.EDU/MOCS-SET-RECORD

Women's Indoor Track

UTC runner Kennedy Thomson set a school record Feb. 9 in the women's 800-meter run at the Bulldog Open in Birmingham, Alabama. Thomson won her second race of the meet with a time of 2:10.73 in the middle-distance race, besting the previous top Chattanooga time of 2:11.06 set by Maddison Melchionna in 2016. Thomson flirted with the school record in the mile the day before at the Samford Invite competition with a time of 4:48.69, just missing the UTC mark by 0.6 seconds. Coach Andy Meyer's track squad was preparing to wrap up its indoor season at press time with the Feb. 22-24 SoCon Championships scheduled at VMI in Lexington, Virginia.

Wrestlers Continue a Strong Program under Ruschell

This season's University of Tennessee at Chattanooga wrestling team is under the direction of first-year head coach Kyle Ruschell. He replaced Heath Eslinger, who resigned in July after nine seasons at his alma mater. Eslinger continued a winning legacy at UTC, and Ruschell expects to continue the tradition.

With 30 Southern Conference Championships since joining the league, UTC has been about winning. Today, the Mocs are seeing stiffer competition around the league from such programs as Appalachian State and Campbell University, both of which have dramatically increased their commitment to collegiate wrestling, Ruschell likes his situation at UTC nonetheless.



"If you had told me last March that I'd be coaching in the NCAAs in

Pittsburgh as the Mocs' head wrestling coach, I'm not sure I'd would have believed you," he laughs. "It really has been a dream come true. It's an honor to coach these great young men."

One of the crown jewels of the UTC program has been the nationally recognized Southern Scuffle tournament, a major competition presented by Compound Sportswear and hosted on the Chattanooga campus at McKenzie Arena every January 1-2.



"The Southern Scuffle is one of the best tournaments in the nation," explains Ruschell, "and it gives UTC wrestling visibility. Being involved with all the things it takes behind the scenes to make the tournament a success really makes you appreciate all the details and help that's required. Our administration does an unbelievable job getting everything organized and making sure it is a first-class event."

Entering the SoCon portion of

their schedule in January, the Mocs were poised to make another run at a 30th league crown. Senior Alonzo Allen was aiming to repeat as league champion at 125, while junior Chris Debien hopes to get back on the winner's podium he occupied in 2016. "Fans expect the same effort and aggressive wrestling throughout the entire season," adds Ruschell when asked about what to expect as the regular season rolls toward year-ending NCAA championship matches. "Our motto has been 'Fight for Every Point." Our guys will not give up on anything.

"There is nothing like the Division I NCAA Wrestling Tournament. It's a time to accomplish the highest goals in wrestling, and I will do everything I can to give my guys their best chance to win," Ruschell

adds. "It doesn't matter who we wrestle, our guys will be ready to compete hard and score points."

With its 18-12 win over Campbell, UTC captured its 17th SoCon regular season title since the league began recognizing a regular season crown in 1994. The Mocs' record at press time was 7-6 and 5-1 in SoCon competition, with the year-end SoCon Championship Tournament set to begin March 10 in Boone, North Carolina.



UTC Men's Basketball

The men's basketball team was 26 games through the season at press time with five regular season contests and the Southern Conference postseason tournament remaining. The Mocs exceeded their win total from a year ago, which was 10, and doubled their SoCon triumphs. The team was 11-15, 6-7 in league play, for fifth place in SoCon standings.

They are 6-1 against the lower half of the standings, 0-6 against the top four. While fifth place is not a spot Coach Lamont Paris' young team strived for in 2018-19, it is not a bad number considering four SoCon teams are ranked in the top 75 in the NCAA NET Rankings. Impressive growth nonetheless for a group that returned just one student-athlete from the 2018 roster. The NET rankings, which are used as a guide by the NCAA Tournament selection committee, shows the SoCon rates among the best in the nation.

Freshman of the Year candidate Kevin Easley continues to lead the Mocs, averaging 14.7 points and 6.4 rebounds per game. He's joined by fellow freshman Donovann Toatley (11.9), sophomore Ramon Vila (10.6) and junior Jerry Johnson, Jr. (10.0). The Mocs regular season wraps up

March 2, followed by the Ingles Southern Conference Championship presented by General Shale at U.S. Cellular Center in Asheville, North Carolina, March 8-11.



Mocs Women's Basketball

After a first-half trip through the Southern Conference schedule, the Chattanooga women's basketball team was in second place at press time with a 6-2 conference record, 11-12 overall for first-year Head Coach Katie Burrows. With the fifth-toughest schedule in the nation according to Real Time RPI, UTC had a big challenge with games against two top 10 opponents and several other teams ranked among the best mid-major squads in the country. The Mocs faced powerhouses Louisville, N.C. State and Virginia Tech of the ACC, considered the nation's most competitive league.

Lakelyn Bouldin remained a steadying force for the Mocs. She was leading the team in scoring and is on pace to become the 29th member of UTC's 1,000-point club. Bouldin ranks among the best 3-point shooters in school history, nearing UTC's top five all-time long-range shooters.

Mocs' freshmen are making their mark this season. Eboni Williams has been a spark off the bench with a team-best four double-doubles. She also was leading in rebounds, is second in scoring and steals, while Arianne Whitaker was leading the conference in blocked shots with 36, making her way into UTC's Top 5 all-time. Cornelius and sophomore Bria Dial have contributed to the block party and have the Mocs first in the league in that category. The season-concluding SoCon tournament was set for March 7-10, also at U.S. Cellular Center in Asheville, North Carolina.

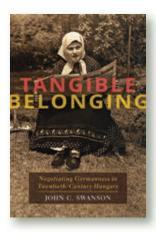


BOOKSHELF

Bookshelf features new books written or edited by or about alumni and other members of the UTC community. To be included, send publisher's press release and a high-resolution book cover image to *magazine@utc.edu*.

JOHN C. SWANSON UTC History Professor

Tangible Belonging University of Pittsburgh Press



John Swanson's book, "Tangible Belonging: Negotiating Germanness in Twentieth-Century Hungary," was recently honored with the Barbara Jelavich Book Prize, a major prize for scholars researching and writing about Central and Eastern Europe.

Swanson's book focuses on the German minority in Hungary from the late 19th to the late 20th century. He dug deep with a grassroots, on-the-ground approach to explore how a rural population, which left minimal sources for research, thought about their own identities as well as their neighbors.

Swanson says his book offers new ways to "think about ethnic and national identity in Central and Eastern Europe."

"German speakers usually thought of themselves as 'Germans,' but what 'German' meant was not the same for all people and it was an ethnic category that was continually changing ... well into the 20th century, German speakers maintained a local, tangible identity. Their sense of being German was determined by the immediate world around them—the tangible world," Swanson explains.



Tim Arnold '84, '88, the UTC Distinguished Alumnus of the year for 2019, earned yet another honor in January when he was selected as one of the 50 Most Influential People in the region by Columbia Business Monthly in South Carolina. He also was named to the magazine's Hall of Fame. Arnold has been president and CEO of Colonial Life and Accident Insurance Co. for four years and since he was handed the reins, the company has become one of the nation's fastest-growing voluntary benefits providers. It now covers more than 4 million people in the United States. **Photo 1**

Immediately after graduating from UTC, he joined Unum—then known as Provident. He spent 26 years there before joining Colonial Life in 2011. He received a bachelor's in management from UTC in 1984 and a master's in finance from the university in 1988. "Arnold's commitment to investing in others extends beyond the workplace," wrote Columbia Business Monthly. "He currently serves as the board chair for the South Carolina Center for Fathers and Families and the American Heart Association-Metro Board in Columbia. He also is co-chair of TransformSC and vice chair for the United Way of the Midlands. When he was living in Chattanooga, Arnold served on the boards of First Tee, Girls Inc. and CADAS, a drug rehabilitation organization.

Timothy George '72 is moving from his role as co-founding dean of the Beeson Divinity School to research professor of divinity at Beeson, located at Samford University in Birmingham, Alabama. *Photo 2*













Beth W. DeWolf '90 is the new president and CEO of One Warm Coat, a national nonprofit that provides free winter coats to people in need across the country. Photo 3

Certified public accountant **Heather Batson** '01. '03 has been added as a partner to the accounting firm Mauldin & Jenkins. She is a member of the American Institute of Certified Public Accountants and the Tennessee Society of Certified Public Accountants. Photo 4

Certified public accountant **John Shipp** '06 has been promoted to partner and chief operating officer with Market Street Partners. Shipp, a former member of the U.S. Marines, was senior manager at the accounting firm prior to the promotion. **Photo 5**

Alexie McIntyre '14 has joined medical funding company ML Healthcare as the regional director of client development covering the Southeast region. The company helps clients cover the financial gap when an injury victim does not have sufficient access to healthcare. Photo 6

Matt Rivers '09 principal product manager at BlueCross BlueShield of Tennessee, is a new member of the board of directors for Siskin Children's Institute. He also is participating in the UTC Executive Education Leadership Program.

Michael Sutton '93, '96 has been named chief financial officer for CHI Memorial. For the past five years, he was vice president of finance at CHI Memorial. *Photo 7*

Jordan Ashton '15 has joined Mortgage Investors Group a loan officer in its Chattanooga branch, where he advises homebuyers from Tennessee and Georgia about conventional loans and those insured by government agencies.

Marley Lentz '16, marketing director at Office Furniture Warehouse, has been named the winner of "Our Flywheel," a national call for organizations to apply a new model for marketing, sales and service to their own business.

Steve Ziegler '81, chief financial officer for Life Care Centers of America, is on the cover and profiled in the fall 2018 edition of Life Matters, a publication of Life Care.

utc.edu/steve-ziegler

Natalie Roy Martin '09 has co-founded Chattanooga's Heed Public Relations with her husband, David. The firm offers consulting and strategic planning, multi-platform creative development and brandenhancement services.

Rvan Hood '04 has been named tax partner at accounting firm J.D. Frost & Co. of Chattanooga, where he specializes in small

business, real estate and the construction industry. Photo 8

David Shamblin '09 a trust services advisor with Pinnacle Financial Partners, was awarded the Certified Trust & Financial Advisor professional certification from the American Bankers Association. The certification is awarded to individuals who demonstrate excellence in the field of wealth management

Cody Harvey '15, an executive director-intraining and registered nurse, has been promoted to executive director at the Shallowford Road location of Morning Pointe Senior Living and Independent Healthcare Properties. **Photo 9**

Jonathan Malone '16 has been hired as construction manager for the Ark Pet Spa & Hotel's franchise crew. He will oversee and manage new franchise construction and leasehold improvements.

Nick McClung '07, Marjorie Parsons '98 and **Tamantha Womack** '99, '08 are nominees for TVA's 2019 Engineers of the Year. McClung is manager of Risk and Quality Assurance; Parsons is senior program manager in the Transmission Planning Department: Womack is program manager for Electrical Power System Analysis. Photo 10











In Memoriam

UTC Professor Emeritus **P.K. Geevarghese**, 85, passed away on Thursday, Oct. 17, 2018. Geevarghese taught at the university for 40 years, retiring in 2006. A member of the sociology, anthropology and geography faculty, he taught a variety of courses, from his popular 101 Introduction to Sociology and 101 Introduction to Anthropology classes for hundreds of underclassmen to advanced courses in Sociology of Religion, Statistics and Research Methods, Organizational Behavior and Families and Groups.

His book, A New Economic Order: A Revolutionary Plan to Eradicate Poverty from the World, was published in 1988. Geevarghese's research articles covered such topics as communism in India, changes in the caste system, the emergence of capitalism in the Third World and the Indian Orthodox Church.

Jim Morgan '60, '69 passed away in January. He earned bachelor's and master's degress from the University of Chattanooga. In 16 years as UTC's wrestling coach, his teams compiled a remarkable record of 209-70-3. He also was a member of the school wrestling team. "I was fortunate enough to meet Coach Morgan and, even though I have not been here long, I fully understand the impact he had on Chattanooga wrestling," said Kyle Ruschell, now in his first year as UTC's wrestling coach.

A 1992 inductee into the UTC Athletics Hall of Fame, Morgan's career win total and winning percentage (.746) are still tops in the school record books. He was the 1975 NCAA Division II National Coach of the Year. In 1977, the team made the jump to the Southern Conference and NCAA Division I. During their first six years in SoCon, Morgan's teams won the conference crown every year. He won SoCon Coach of the Year honors in 1978, 1981 and 1983. One of his wrestlers, Randy Batten, was the NCAA Most Outstanding Wrestler in 1975.

Chris Jones' Outstanding **Coaching Career Rewarded**

After almost two decades north of the border in Canada, Chris Jones, a 1990 graduate of UTC, has landed a coaching job in the United States. And it is a good one.

Jones, who grew up in South Pittsburg, Tennessee, and played for the Mocs in 1986-87, is now senior defensive assistant with the Cleveland Browns of the National Football League. He joins the Browns after 17 years in the Canadian Football League, where he worked with five different teams.



Chris Jones

Over the course of his entire CFL career, Jones' teams missed the playoffs only once and played in 13 division finals and seven Grey Cups, the CFL's Super Bowl. He has four Grey Cup rings: 2002 with the Montreal Alouettes, 2008 with the Calgary Stampeders, 2012 with the Toronto Argonauts and 2015 with the Edmonton Eskimos.

He was head coach in his last two stops the Edmonton Eskimos and the Saskatchewan Roughriders. In 2015, his Eskimos won the Grey Cup. In 2018 with the Roughriders, he was named CFL Coach of the Year. Jones spent three seasons as the Roughriders' vice president of football operations, general manager and head coach. Under his leadership, the Roughriders improved from a five-win season in 2016 to a 10-8 record in 2017 and a 12-6 tally in 2018.

Jones began his college coaching career as a graduate assistant at Tennessee Tech University in 1995 and spent time at the University of Alabama (1997), UT Martin (1998) and again at Tennessee Tech (1999-01).

UT President's Council Awards go to UTC Benefactor, **Communication Strategist**

Gary W. Rollins and Tom Griscom are 2019 winners of University of Tennessee President's Council awards, given annually by the UT system-wide

president to recognize exceptional, positive impact on the university.

Rollins is a 1967 UTC graduate who made a \$40 million gift to the university in 2018, the largest in UTC history and resulting in the naming of the Gary W. Rollins College of Business in his honor. He is the 2019 President's Council Philanthropist of the Year.

Rollins said his decision to make the unprecedented gift to UTC is a result of compelling, evident progress by his alma mater and of the persistence of UTC leadership



Kathleen and Gary W. Rollins

in making him aware of that progress. He is a native of Delaware who now makes his home in Atlanta with his wife, Kathleen Rollins.

Griscom, winner of the 2019 President's Council Service Award for exceptional work and contribution to the advancement of the university toward excellence, is a 1971 UTC graduate. His career began as a Chattanooga Free Press reporter and eventually brought him back to the newspaper industry as editor and publisher of the Chattanooga Times Free Press—with stints at the highest levels of government in Washington, D.C. in between. Griscom served as press secretary for U.S. Sen. Howard Baker and later as communication director for President Ronald Reagan.



Tom Griscom

Griscom has served as an advisor to officials with UT system administration, UTC and UT Martin, providing counsel and insight in multiple areas. In 2017, fellow alumni selected him as one of the most distinguished graduates of any UT campus in the previous 100 years, as the magazine Tennessee Alumnus celebrated its centennial year of continuous publication. He is a Chattanooga native and current resident, along with his wife, Marion Griscom.

The three other 2019 honorees are Jim and Natalie Haslam and U.S. Sen. Lamar Alexander. The Haslams, both 1952 UT Knoxville graduates, are recipients of the first-

ever Andy Holt Lifetime Achievement Award for transformational impact on the university. They have made multiple gifts to UT Knoxville, including to the School of Music and for the naming of the James A. Haslam II College of Business. Alexander, a former U.S. Secretary of Education, former Tennessee governor and UT president from 1988 to 1991, was named recipient of the Jim and Natalie Haslam Presidential Medal, instituted in 2007 to recognize exemplary giving, leadership, service and willingness to advocate for private support of the university by others. As UT president, Alexander was instrumental in the creation of the Chairs of Excellence endowed professorships program which exists at all UT campuses today.

LETTERS FROM **VIETNAM**

Student's Experiential Research Looks at Previously Unanswered Questions

BY SARAH JOYNER

Senior history major Mason Fox says her research project

"kind of happened by accident." She wanted to register for a 1960s-era history class, but the class was going to conflict with practices for the UTC women's soccer team, of which she was a member. Fox emailed the professor, Susan Eckelmann-Berghel, to see if she could do an independent study. "I've been working with her (Eckelmann) going on two years, pretty much by accident. But it's been a wonderful accident because it led me here," Fox says.

"Here" was the research assignment Fox and Eckelmann settled on in the history class. Instead of taking the history class in a traditional lecture setting, Fox met with her professor one-on-one for the independent study. In the midst of these sessions her project began to take root when Eckelmann asked Fox if she was still grappling with questions about the material. The professor's question was meant to spur reflection, but there also was an ulterior motive. "I thought, 'Well, we've been talking a lot about politicians and Martin Luther King Jr. and the antiwar and civil rights movements, but I wonder how all of this affected soldiers who were in Vietnam?" Fox says. When she blurted her thoughts out loud, Eckelmann responded with, "Excellent question. Research it more." "And I thought, 'Ooh, you got me. You knew what you were doing!" Fox adds.

Searching for the answer to her question has put Fox on a two-year journey, seeing her travel last summer to the Texas Tech University Vietnam Center and Archive in Lubbock, Texas. The question has fueled Fox's senior thesis, which she will complete this spring. Her five-day visit to Texas Tech enabled Fox to be up close and personal with the former soldiers of Vietnam and their thoughts. During her research, which was funded with scholarships from UTC's Council of Scholars and the history department, Fox ran her fingers across newspapers and held letters that had traveled thousands of miles. She recalls one letter a soldier sent back home to his family in Wisconsin. The letter was dated in January, and Fox says he wrote something along the lines of, "I'm missing the snow back home. I'm sure you have at least a foot. It's monsoon season here and it's been raining for three weeks."

That was when she noticed the pattern of mis-coloring and smudged ink on the paper, what must have been raindrops. "That was so cool," Fox says excitedly, eyes open wide. "He probably had a little tarp over his head. That's the side of history that I've always loved. It's the nostalgia, putting your mind in the perspective of that person who lived long ago."

The abundance of material at the Vietnam Center was overwhelming. But that feeling was quickly replaced with curiosity and excitement. Fox was in a situation that causes even the most weathered researcher a tinge of anxiety. Often, well-trained historians "consider this type of research work challenging," explains Eckelmann. "Yet Mason embraced this opportunity to meet with archivists, dig through hundreds of boxes and collections and listen to dozens of interviews of Vietnam veterans and former military personnel. Through declassified government documents and speeches, Mason's research adds new insights to the context and escalation of the military conflict."

Fox's first dive into original research as an undergraduate hasn't been easy, and last fall was one of her hardest semesters yet. "I got down to just getting 15 minutes of work in a day for the project," she says. She's learning how to manage her time and responsibilities and how not to be intimidated by the big picture. "I don't feel like I'm a professional at this yet, but that's OK because this is a first experience," she says.

She has an entire committee of professors with access to her project but they, along with her parents, have become a source of checks and balances and, most importantly, encouragement as she wanders into the foray of firsthand accounts, letters, scholarly conversations and forges a path to a specialized topic that's all her own. "Mason is an incredibly hard-working, smart and independent scholar," Eckelmann says. "But she is also a kind, generous and thoughtful student who juggles a range of different responsibilities. How she manages her commitments as a researcher, as a student in the history program and as an athlete as part of a team truly makes her stand out. I'm honored to serve as one of her mentors."



utc.edu/mason-fox-vietnam



Mason Fox

What has the UTC experience been for you?

UTC helped me become a better person because I've found professors who are super-helpful. Sports have always been a part of that, but with the help of professors like Dr. Eckelmann-Berghel, I've discovered interests, what my skills are and what I can improve upon.





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