FROM THE DEAN

The publication of this 2015 annual report is timely. I am at the end of a challenging and gratifying first term as dean and the college is nearing the end of the time period covered by the five-year strategic plan approved in March 2012. The success we are seeing across the university and the college gives me optimism and renewed energy. My appointment has been renewed and I look forward to a second five-year term as dean, and the opportunity to lead the college in the refresh of our strategic plan that will guide us on the next leg of our journey to the Top 25.

Within the pages of our 2015 annual report are stories and data that reflect both our accomplishments as well as our continuing challenges as we assess our progress at this five-year point. As a foreword to the report, I will offer some key points regarding each of our five strategic goals as they relate to faculty, students, infrastructure, and resources.

At the heart of our enterprise is our faculty, and we experienced an overall 5 percent increase in tenure-line faculty over the past five years. However, the number of faculty remains insufficient to meet the teaching demand and remains 43 percent fewer than our aspirational peers. At the same time we had a 19 percent increase in non-tenure line faculty to meet our teaching demand, but these faculty do not contribute to our research mission as a R1 (research intensive) classified university. To our benefit, successful fundraising has increased the number of endowed faculty awards and professorships by fifteen in the last five years which has been instrumental in supporting, retaining, and hiring excellent tenured faculty. We have also increased the diversity of faculty. The number of women faculty is up by slightly over 18 percent and continues to rise. Looking at diversity by race and ethnicity from 2009 to 2015, the numbers have increased for Asian (up by 13 percent), Black (up by 91 percent), Hispanic (up by 43 percent) and Native American (up by 50 percent).

Our faculty continue to be successful in attracting external funds to support their scholarship and research as well as their graduate students. The percentage of faculty across all disciplines with external funding is 33 percent. Not surprising, faculty in the natural sciences division lead in external funding with approximately 70 percent of those faculty holding research grants and awards. Our humanities faculty continue to be very competitive nationally in garnering National Endowment for the Humanities fellowships and summer stipends.

In addition to teaching and mentoring students, our faculty are engaged in pathbreaking research and creative expression that enriches lives, addresses social conditions, and seeks solutions to society’s problems. In the spirit of UT’s land-grant mission and Carnegie classification, faculty and their students are partnering with individuals and organizations throughout the local community and beyond in projects that are making a difference. These experiences help prepare our graduates to become innovative citizen leaders.
Our graduate student enrollment has declined by 4.5 percent over the past five years. The decrease is attributable to the loss of important funding in some departments which had allowed them to increase the number and quality of the students in past years. With fewer students, there is now a higher percentage of students funded. The number of graduate students supported by external funds in the last five years has increased by 40 percent. Faculty grants have provided some support; however, funding awards earned by the students themselves and private gifts to the college support many fellowships for graduate students. This financial support alleviates the need for graduate students to seek part-time employment outside the university and allows them to focus full attention on their research, and to finish advanced degrees in a timely manner.

In 2015, our overall undergraduate student enrollment in degree programs increased by 3.5 percent, following a period of decline in an era of media devaluation of liberal arts degrees. We attribute the reversal of this trend in our college to the implementation of our revised curriculum last year that encourages second majors and minors, study abroad, and other experiential learning. We’ve boosted the number of experiential learning opportunities throughout our departments to encourage students to apply their knowledge, develop practical skills, and gain real-world experience. Our goal is to better prepare them for the job market and to make them more attractive to employers.

At the same time, we have improved the educational experiences of our students by incorporating new pedagogies that enhance student learning in the classroom. We have also implemented support systems such as targeted and intensive advising and tracking of students’ academic progress to help our students graduate in four years so they can efficiently begin their careers or pursue an advanced degree.

Construction is in progress for two new buildings along Cumberland Avenue that will dramatically improve our ability to deliver a quality STEM education in addition to providing some state-of-the-art research space for faculty. Strong Hall will have laboratory space for all introductory chemistry and biology courses and will serve as the new home for the departments of anthropology and earth & planetary sciences. It is scheduled to be in use by January 2017.

The Ken and Blaire Mossman Building, a state-of-the-art laboratory and classroom facility scheduled to open by fall 2018, will house portions of three units within the college: microbiology, biochemistry & cellular and molecular biology, and psychology.

As we strive to improve the educational experiences of our students we are attuned to the rising costs of education. In terms of resources, we are better off than many institutions. In 2014 and again in 2015, the state fully funded the formula recommendations of the Tennessee Higher Education Commission, allowing tuition increases to remain very small. At the same time, our numbers of donors has increased annually—we have the largest number of any college—and we have received between 7 and 12 million dollars annually for the last five years. Our goal is to increase annual fundraising gifts to fifteen million dollars. Private gifts have been the margin of excellence in the college, providing undergraduate and graduate student fellowships and scholarships as well as faculty awards and professorships—which are critical to our ability to be competitive in recruiting and retaining the best and brightest students and faculty.

I hope readers of this report are inspired by our progress and are motivated to join us on the journey as we partner with our alumni and friends to continue on a path to a bright future for the college and the university.

- Theresa M. Lee
On one December morning Larry McKay suited up in a rain coat and rubber boots and headed out into the Tennessee River basin. A couple dozen other people joined him. They climbed down canyons, into caves, and through forests looking for scars on trees and specific kinds of deposits. What were they searching for?

Signs of a flood.

The expertise of McKay, the Jones Professor of Hydrogeology and head of the Department of Earth and Planetary Sciences, had been called upon by the Electric Power Research Institute, Nuclear Regulatory Commission, and Tennessee Valley Authority for help in flood risk analyses. As manager of the multi-university effort, McKay and fellow researchers, which include geography’s Sally Horn and Henri Grissino-Mayer and anthropology’s Howard Cyr, are aiming to figure out if certain methods can help predict river flooding near power plants in the eastern United States. The goal is to avoid what happened in Fukushima, Japan in 2011.

“The tsunami flooded the power plant which caused failure of the auxiliary power and cooling systems, leading to a partial nuclear meltdown and release of radioactive elements to the environment,” explained McKay. “Nuclear power plants in the interior of the United States are typically located on major rivers or lakes, which may be susceptible to damaging floods. We need to know the risk of rare, but very large floods for rivers, like the Tennessee, where nuclear power plants are located.”
Right now, the real risk for floods of power facilities in the eastern part of the country is not known because records have only been kept for the past hundred and fifty years or so. And, for power plants, that’s not enough.

“A thousand-year flood has a one in one-thousand chance of occurring any given year. That goes well beyond our monitoring records, but could occur at any time and do a lot of damage,” said McKay. “To help assess this risk, we need to determine records of river flooding going back many thousands of years, rather than a few hundred years.”

McKay and his colleagues can peer back into prehistoric times by identifying buried flood deposits, high water marks, and other indicators such as damage to trees from flood debris. When this ancient flood data is combined with measurements of when the flood occurred drawn from age-dating methods, the researchers can construct a long-term record of flood occurrences.

This data will then be handed over to engineers who will construct models—that take into account changes to the landscape such as farmland or cities predict the probability of major floods in the future.

The project is still in the feasibility stage but, if deemed effective, these investigative approaches will likely be carried out throughout the eastern United States to determine flood risk at other power facilities. Power companies will then use this information to reinforce their plants with appropriate measures such as higher containment walls or elevated back-up power systems potentially saving the country from a life-threatening, economy-crippling catastrophic event.

This project is just one example of the impact of McKay’s work. Over the past twenty-three years, his research in hydrogeology has helped government agencies and industry deal with many environmental problems. These include cleaning up contaminated soil and groundwater at federal nuclear facilities, industrial sites, and even an ammunition manufacturing site in Tennessee. He has also investigated problems with microbial contamination from agriculture or human waste that can impact wells, springs, and streams in Tennessee and Bangladesh.

McKay takes a very practical approach to research and education. He calls himself a problem-solver who teaches his students to be problem-solvers, too, while preparing them for the job market.

“I’m interested in what I can do to help the community and society benefit from what we do at the university. I also want to do what I can to help my students become more successful,” shared McKay, who says his priorities reflect those of land-grant institutions like UT.

These priorities are evident in the types of classes he teaches which include career planning courses for both undergraduate and doctoral students. He recently received funding from the National Science Foundation to help community college students successfully transfer to geoscience programs at UT. The goal of the project is to develop methods to improve student success and ultimately prepare Tennessee students for career opportunities in high growth areas like geology and environmental science.

McKay’s pragmatic approach to research and education was strongly influenced by his family background. He comes from a long line of blue-collar workers and builders. His grandfather was a carpenter, his dad a pipe-fitter, and his brothers all work in construction. He says he does the same thing, just in an academic setting, helping others build a better world.

“I’m just a regular guy who likes to build things.”

And some of those things involve helping build a better future for our students, by preparing them to fill important jobs in this country.

- WHITNEY HEINS
Lessons from a History of Religious Violence

More violence in the Middle East. More land and lives lost. The sudden rise of the Islamic State of Iraq and Syria (al-Sham), or ISIS, has left most of the world terrified and baffled as to how to stop the seemingly unprecedented ascent of this very violent religious group.

But ISIS’s ascent is not entirely unprecedented. In fact, humankind has experienced religious violence time and time again, and history may be able to teach us a thing or two, says Christine Shepardson, Lindsay Young Professor in the Department of Religious Studies.

Shepardson has traveled the globe, including areas which have since become ISIS territory in Syria, to study early Christianity in the eastern Mediterranean. Her research began with investigation into the confluence of piety and politics in the fourth-century Christian church and led her to publish two books. She’s now working on a third book, with support from the National Endowment for the Humanities (NEH), to examine fifth- and sixth-century splits within the early Church. Her current research focuses on Syrian Orthodox Christians and seeks to understand how this minority group was able to survive despite persecution by government and church leaders. The lessons she is learning may well have implications for religious violence plaguing our world today.
The Syrian Orthodox Church separated from the imperially sanctioned church of the Roman Empire following the politicized religious controversies of the fifth and sixth centuries. In the decades that followed, the small religious group often found itself the subject of persecution. Religious leaders were kidnapped and killed. Politicians sided against them. Yet, this group survived. Even today, these Christians are sometimes seen on the news as the latest ISIS victims. How are they still here despite all the bloody odds?

Shepardson, a 2016-2017 NEH fellow, a 2009-2010 American Council of Learned Societies Fellow, and a 2008 American Philosophical Society Franklin Research Grant recipient, has an idea. Searching for clues in religious manuscripts that she translates from Syriac or Greek, she has found that minority Christian groups are often able to survive by drawing on an early history of martyrdom. Identifying their current suffering with these early martyrs creates a strong sense of legitimacy and community identity.

“We see this language of martyrdom time and time again throughout Christian history,” said Shepardson. “It draws these groups together by saying that ‘we are the true people of God and we need to stand up for our traditions even if we are persecuted’.”

Shepardson’s hope is that by looking at a historical case of religious violence in the Middle East, we can learn something about the process by which religious minority groups are able to splinter into new groups, and what strategies they use to survive—whether they are the perpetrators of violence or its victims.

ISIS, for example, is a small minority group within Sunni Islam. They use violence against others, but they also use violence committed against them as evidence that they are suffering for God and defending religious truth.

“By looking at the historical example of sixth-century Christianity, we can get a sense of what kind of propaganda leaders use to persuade people to persevere through violence, and sometimes also to justify its use against others,” explained Shepardson.

Shepardson theorizes that better understanding religious conflicts in the Middle East in the sixth century might offer one more tool to try to understand, predict, and intervene in religious conflicts in the same regions today.

She enjoys sharing her knowledge of early Christian history with the public, often speaking at senior centers, churches, and synagogues. To her, a large part of the pleasure of being a professor is being able to share what she has learned.

“The purpose of a land-grant institution like UT is to give back to the community. As a humanities professor, one important thing I can give back is some of the ideas and knowledge from my research, in the hope of giving people new questions to think about, new ways of seeing old problems, and new information that might help them make the choices they face in the world,” she said.

Shepardson became interested in studying the history of Christianity while an undergraduate student at a college whose community was much more diverse than her small hometown. She grew fascinated by how many different ways people interpreted Christian scripture to justify ideas on all points of the religious and political spectrum. Today, she aims for her students to have the same exposure that she had to a variety of interpretations and ideas.

“I love teaching early Christianity, especially in this part of the country, the Bible belt. There is so much passion about religion here,” she said. “Often the historical information I teach is new to my students, whether they’re Christian or not, and that always leads to interesting questions and good discussions, especially if that information at first seems at odds with other things they have heard.”

Shepardson aims for her students to leave her classroom empowered to ask their own questions and gather their own information about whatever it is in the material that catches their interest. Because, from her experience and research, a lesson in history can be a very powerful thing.
In his dreams, Jimmy Mays imagines a world with less rubber. Not that rubber is a bad thing. After all, it plays a key role in almost everything we do. But there’s something better than rubber. Something that’s stronger, more flexible, and recyclable. Something that has the power to help end pandemics and shrink our carbon footprint. And that something was created in Mays’ lab.

More than twenty years ago, the chemistry professor was doing what a lot of chemists do—playing with polymers, linking different types together to see the effect on material properties. He was taking a polymer out of a glass jar when it...wouldn’t...come...out. He kept stretching and stretching and stretching, and it stayed put, even returning to its original shape. At first, Mays was a bit annoyed and then...a light bulb went off. He thought that this ability to stretch (twenty times its initial length) could be really useful. Thus, began his journey to develop something he dubbed “superelastomers”—rubber’s new competitor.
Think of a rubber band—if you keep stretching it, eventually it will become misshapen or break. Also, you can’t recycle it. The only way to get rid of it is to burn it. Superelastomers, on the other hand, are “super” because they are more stretchable; recyclable; have better elastic recovery; and are able to have their elasticity, hardness, and softness controlled as compared to rubber.

These properties have the power to revolutionize products such as toothbrushes, surgical materials, skin care, audio devices, and filtering technologies, to name a few. For example, they could improve products like surgical gloves by making them thinner improving surgeons’ dexterity in the operating room. Or, they can breathe new life into old things by being melted and re-shaped as opposed to rubber which has little chance of reincarnation. (Millions of tires are burned each year, for example). Mays has even been approached about their use for creating artificial skin.

Superelastomers’ properties are different because the molecular architecture is different. Rubber is crosslinked in order to add strength. In contrast, superelastomers are single strands of two different types of polymers. This makeup allows Mays to change their properties to fit a product by altering how long links are or by adding a branch here or there.

The US Army saw superelastomers’ promise—funding Mays’s fundamental research for twenty years. And so did Bill and Melinda Gates whose foundation funded $100,000 worth of research and development in 2013 for its use in creating the next generation condom.

You read that right—condom.

Called the Grand Challenges in Global Health, Gates’ initiative aims to foster scientific and technological innovation to solve key health problems in the developing world. According to the challenge, condoms have a stigma that they decrease pleasure. With the funding, Mays and his graduate students developed a prototype that’s thinner than condoms used today that significantly preserves or enhances pleasure in order to increase regular use. The condom can also be cheaper to make through the use of a less expensive injection molding process that promises to lower cost, allow for texturing of the condom surface, enhance softness, and mimic the texture of skin.

The impact could be world-changing. Today, close to thirty-seven million people globally are living with HIV and the number of newly infected people each year outnumbers those who gain access to treatment by two to one, according to the foundation. Mays’ invention is part of a comprehensive response to stop the pandemic.

“This product could lead to substantial benefits for global health, both in terms of reducing the incidence of unplanned pregnancies and in prevention of infection with HIV or other sexually transmitted infections,” said Mays, who is awaiting word on the next phase of funding—of a million dollars—to scale up the prototype.

Superelastomers’ power to change the world doesn’t stop there. A major chemical company based in Japan that makes roofing, medical tubing, shoe soles, and adhesives has recently licensed the technology. The company also hired one of Mays’ doctoral students who started work this year.

“My student came to do the presentation with me at the company’s site in Kentucky and their scientists were really impressed,” said Mays. “My thinking is, ‘why do this by myself when I can give students this experience and exposure?’”

For Mays, his job of mentoring students isn’t done when they finish their degree. It’s done when he helps them find a job.

He looks forward to watching his current six doctoral students graduate—with some helping him carry out his dream of a world with less rubber—and more superelastomers.

- WHITNEY HEINS
Finding Peace

**Mike and Jane are fighting.** Again. There is a lot of screaming and shouting. Punches are thrown. Neighbors hear the noise, get concerned, and call the police. Mike gets arrested and referred to a batterer intervention program. He gets out and the process repeats. And repeats.

This scenario is a very common one. So common, in fact, research shows that men who complete such programs are only five percent less likely to revert back to their old habits than those that drop out of the program or are arrested and never attend the program at all.

This finding deeply troubled Gregory Stuart, clinical psychologist and Arts and Sciences Excellence Professor and Provost’s Beaman Professor, who wondered, “What can I do to change these outcomes and enhance the safety of victims and their families?”

His action plan involves a two-pronged approach to defeat domestic violence—with a focus on improving treatments and an ultimate goal of a more peaceful world.

The first prong involves potentially changing the treatment that occurs after someone is arrested for domestic violence. When looking at these so-called batterer intervention programs, Stuart noticed something—a lot of the people had drug and alcohol abuse issues which interfered with their implementing the skills they were learning in the program. He wanted to know what would happen if the batterer intervention programs were coupled with substance abuse treatment.

So, he applied to the National Institutes of Health (NIH) for funding, which they provided, in which he randomly assigned men and women to the standard batterer program alone or to the standard batterer program plus a ninety-minute alcohol treatment. The results were promising. Both the men and women who received the alcohol treatment experienced positive outcomes for their domestic violence and their alcohol usage—the men for six months and the women for at least a year.

“This work is critically important given that individuals with alcohol problems are vulnerable to recidivism following batterer intervention programs, and that batter intervention programs in general are only marginally effective at reducing rates of domestic violence,” said Stuart, who aims to further examine this issue by involving longer, more in-depth alcohol adjunct treatments to see if the outcomes are stronger. If they are, then policy change could be on the horizon.

The second part of Stuart’s plan of attack involves peering into our genetic code to develop individualized treatment plans. To do this, he and his team collected DNA from the subjects who consented to participate in the treatment studies to see if people with certain genetic backgrounds would respond better to alcohol and violence intervention than others. He then worked with research collaborators at Brown University to isolate two genes they hypothesized are tied to impulsive and violent behavior. What they found is that men with higher cumulative genetic risk scores with these two genes had better outcomes—as in less physical violence perpetration, less injuries to
partners, and less drinking—when they received a brief alcohol intervention compared to men who did not receive the brief alcohol intervention. In other words, the combination of the two genes could be used for the prediction of treatment outcomes. Next, Stuart hopes to cast the net wider into the gene pool to investigate what forty more genes can reveal.

His overall mission for this prong of the attack is the ability to someday match people to the right psychotherapy so they get the best results. “People would be able to take a genetic test and then, based on the results, doctors would choose from a menu of treatments the option that would likely have the most effective outcomes for their domestic and alcohol issues,” explained Stuart.

Stuart hopes to one day see the impact of his work firsthand. As a practicing clinical psychologist, he works with those battling addiction every week. While he is helping them, they return the favor by giving him ideas for new research.

“The work I do with the patients generates hypotheses for my research. My students and I do a lot of research at the clinic. And then, of course, the research will have direct implications for the treatment of the patients,” he shared.

If it seems that Stuart has a lot of ideas for research already, that’s a fair assessment. His work includes close to 300 publications and he has served as the principal investigator on grants totaling almost $6 million and a collaborator on grants totaling $16.0 million.

All these research studies open up opportunities for his students who have ideas of their own such as investigations into child abuse, family of origin violence, technological aggression, sexual coercion, suicidal ideation, etc.

“Mentoring is the most critical element of my professional mission,” said Stuart. “My goal is to figure out what kind of careers students want and maximize opportunities to help them realize their professional goals.”

And, while mentoring the next generation of researchers, he is strengthening his army in battling domestic violence so there are fewer Mike and Jane scenarios in the world.

- WHITNEY HEINS
The Power of Hair

We’ve all had one. A day where you feel like your fate is sealed before you even step out the door. A day where you feel less than confident and not like yourself. A day where you think everyone’s looking at you and judging you.

You know, a bad hair day.

Althea Murphy-Price, associate professor in the printmaking program—ranked second in the nation—remembers a bad hair day when she was a teenager. While getting ready for work, she used a new hair product that left her curls in a tangled mess. She and her mom tried furiously to untangle the knots but failed, and she felt she had no choice but to call off that day.

Murphy-Price didn’t go to work not because her physical appearance wasn’t at its optimum but because her hair represented who she was—her heritage and culture. Her hair was her identity.

“This was a really defining moment in understanding my relationship to the world because it signified a restriction, or even more challenging, a limitation. Although I made the decision to stay at home that day, it felt like society made the decision for me,” she explained.

Murphy-Price spent much of her childhood in Louisiana where hair was a central anchoring point to their day-to-day lives.
“What you did, where you went, what activities you were willing to do had to do with that simple element—hair,” she said.

Indeed, throughout history, hair has been used as a powerful symbol of pride, shame, faith, even politics. For example, women after the Battle of France in 1940 were punished for having relations with German soldiers by having their heads shaved. During the Civil Rights era, the “afro” became a political symbol for black pride. Hair was even the subject of a successful Broadway musical during the Vietnam War era.

This power of hair has long fascinated Murphy-Price—particularly the role it plays in defining beauty—something that dates back to Biblical times where a woman’s hair was referred to as her “crowning glory.” Thus, hair has become a focal point for her art.

“I love all the different connotations it has—as a symbol of assimilation, gender, beauty, and identity,” she said.

Using manufactured and human hair in prints and soft sculptures, Murphy-Price explores hair’s role in the interpretation of beauty. She aims for her work to invoke questions such as, what does it mean to be beautiful? What defines our sense of beauty? What role does hair play in perceiving ourselves and others? Of these perceptions, what’s real and what’s fake?

Like many artists, the professor draws a lot of inspiration from her own experiences. For example, she got an idea for a piece from her two daughters who asked why they had to have their hair fixed when others could wear it as is.

“I started to think about how early we learn about ourselves, gender roles, and associations with what’s acceptable and what it means to be pretty,” she explained.

These thoughts were translated into a collage of forms, sculptures, and screen-printed colorful, shiny, and glassy images that look like colorful bows, berets, and play things.

Another of her series features hair wigs made of felted wool and hair meant to look like church hats. The work ties back to her childhood memories of Sundays where women wore regal yet outrageous hats to church.

“These hats were a spectacle yet functional and I wanted my work to exist in a similar way,” she said. “I wanted to explore this sense of obligation and ritual we have in how we dress and present ourselves.”

Her work has been exhibited around the world from Chicago to China. To create much of it, Murphy-Price uses an unconventional approach to the process of lithography—in which ink prints are made from a flat surface—where she manipulates the hair itself and uses a photolithographic method to expose its image onto a printable surface for reproduction. The method allows Murphy-Price to create prints that capture the likeness of hair in extreme detail and complexity. It also continues her exploration of the role hair plays in defining our identities.

“Because the exposure captures an almost photographic resemblance onto a printable surface, I can create prints that trick the eye into believing that the printed image looks more real than the hair itself,” she said.

“This deceptive quality allows me another way of communicating an idea of hair as a false identity.”

Early on Murphy-Price used mostly traditional materials in her art, but in graduate school she was introduced to the idea to use hair. Instantly, her world of expression burst open. Today, she tries to enable the same eye-opening experience for her students by encouraging them to experiment with new ways of expressing themselves.

“I try to facilitate projects that allow for lots of trial and error and opportunities for work to achieve multiple different outcomes,” she said.

Clearly, Murphy-Price is inspired by her materials, her medium, and her content. Moreover, her works remind us of the value of all works of art to offer the engaged viewer new ways of thinking about the world.

- WHITNEY HEINS
Two of the most prestigious national recognitions for humanities scholars are the National Endowment for the Humanities (NEH) fellowships and NEH summer stipends. Since 2004, UT ranks first nationally in the number of NEH summer stipends, tied with Northwestern University. UT ranks eighth nationally since 2004 in the number of NEH fellowships, one award behind Harvard University.

These funds not only help make UT an R1 (research intensive) university that produces cutting-edge research in the natural sciences, but also support the research of graduate and undergraduate students.

OVER 80% of the faculty in chemistry, physics, earth and planetary sciences, and microbiology have external research funding.
The Department of Theatre is one of only twelve League of Resident Theatres (LORT) programs in the United States. These are theatre programs that house a professional company, which allows students the opportunity to perform with seasoned professionals. Last year every play required scheduling additional performances to accommodate the demand.

The School of Art is already in the Top 25 in the nation.

The printmaking program is ranked second nationally among both public and private schools, trailing only the University of Wisconsin. The graduate program tied for 15th nationally among public schools along with the University of California-Irvine, the University of Illinois-Chicago, the University of Illinois and the University of Iowa.

**Rankings from the 2017 US News and World Report rankings of Best Graduate Schools in the Arts (MFA in Studio Art). 229 programs were ranked overall, with a new list being released every five years.

Printmaking faculty: Beauvais Lyons, Althea Murphy-Price, and Koichi Yamamoto
EXPERIENCE LEARNING
Faculty engage students in experiential learning opportunities in the local community and abroad, in collaborative research in the laboratory, and in internships arranged with business and corporate partners. Their goal is to produce graduates with lifelong skills in learning and problem-solving to prepare them for the ever-changing global environment.

Political Science Study Abroad

During the summer 2015 Professor Ian Down led a group of UT students on a study abroad trip to London. The students lived in the center of London and undertook a course on the British Political System and Political Culture, combining class material with visits to historic sites, such as the Banqueting House, Westminster Abbey, the Houses of Parliament, the Cabinet War Rooms, the Royal Courts of Justice, Windsor Castle and Hampton Court Palace. In addition, students met with representatives of UK political parties – the Conservative Party, the Labour Party, the United Kingdom Independence Party and the Scottish National Party – and visited a variety of politically and historically relevant locations within London.
PREPARING FOR A CAREER IN MEDICINE

Widespread use of antibiotics fosters the emergence of antibiotic resistant bacteria. These bacteria evolve enzymes that modify antibiotics to make them useless. Jordan Roach wants to understand how bacterial enzymes that deactivate antibiotics work. By studying how these enzymes function, he hopes to contribute to the discovery of novel drugs to fight antibiotic resistant bacteria.

Jordan’s faculty mentor, Engin Serpersu, professor of biochemistry & cellular and molecular biology, said Jordan came to his lab seeking a project that would be beneficial for his future educational and career goals. “He was particularly interested in working with proteins on a topic related to medicine. The project we settled on was the optimization of expression, isolation and characterization of an enzyme (aminoglycoside N3-acetyltransferase-Ib (AAC-lb) that causes resistance to aminoglycoside antibiotics. Jordan has worked diligently, accomplishing more than some of the rotating graduate students.”

The history of working on the AAC-lb enzyme in the Serpersu laboratory had been challenging because at first this enzyme precipitated during isolation, rendering it unusable. Jordan tackled the problem, trying a number of approaches that included a variety of expression conditions and even re-cloning the plasmid. By the end of the semester, he was successful in expressing the enzyme in soluble fraction in sufficient quantity for purification and biophysical studies. Jordan is currently trying to determine the kinetic properties of the AAC-lb.

“I have thoroughly enjoyed my time in the Serpersu lab. Professor Serpersu has been an outstanding mentor who has not only assisted me in establishing

a firm foundation in protein biochemistry and biophysics, but has also sharpened my interpersonal communication skills in the natural and physical sciences,” said Jordan.

Jordan’s dream to conduct research at St. Jude Children’s Research Hospital is about to come true. He has been selected to join the Hatley lab at St. Jude through the Pediatric Oncology Education Program following graduation.

After his internship at St. Jude, Jordan intends to pursue combined MD, PhD degrees through a Medical Scientist Training Program (MSTP) or another MD, PhD granting program. Although he is open to all fields of medicine, Jordan has special interests in pediatric neurological surgery and translational research.
International Service-Learning:

Gulu Service and Study Abroad Program (GSSAP)

GSSAP is a unique study and service-learning program at the University of Tennessee in which students may earn six credits while studying an on-site course, Conflict and Peace-Building, in Northern Uganda. Taught primarily by Ugandan faculty of Gulu University’s Institute for Peace and Strategic Studies (IPSS), staff of non-governmental or research organizations, and other members of the community, the team is led by UT faculty co-leaders, Rosalind Hackett, professor of religious studies, and Tricia Hepner, associate professor of anthropology and director of the Disasters, Displacement, and Human Rights Program (DDHR).

As a complement to the classroom studies, students work in local community-based organizations to reinforce what they have learned. This may include working for individuals to implement programs for peace and development, volunteering, or helping various Ugandan organizations and institutions.

For example, Austyn Grooms was a GSSAP participant in the summer of 2015. She worked with THRIVE Gulu, whose mission is to empower and assist communities in post-conflict Northern Uganda.

“THRIVE provides disadvantaged youth with computer skills classes with the hope that graduates of the classes will be able to return to school and/or find employment,” said Grooms.

“THRIVE’s Women Empowerment Group provides a much needed support system for the women who were abducted by the Lord’s Resistance Army rebels.”

Undergraduate and graduate students in any major are equally eligible to apply for the GSSAP program which is capped at twelve students. Students who complete the course earn three credits in Anthropology 491: Conflict and Peacebuilding in Northern Uganda and three credits in Religious Studies 492: International Service Learning in Northern Uganda.

UT students have been travelling to Gulu, Uganda for a credit-based study and service abroad program (GSSAP) since 2011. It is the university’s first academic service-learning abroad program, complementing more traditional study abroad service and university exchange programs.

Uganda is a land-locked country in East Africa with a population of approximately 33,000,000. Gulu (pop. 150,000) is the largest city in Northern Uganda, an area that is recovering from a 21-year conflict. It was the site of a prolonged conflict between the Lord’s Resistance Army (LRA) rebels and the Ugandan Government. Since 2006, the region has been peaceful. General populations as well as a host of local and international government and nongovernmental agencies are actively engaged in peacebuilding, reconciliation, and reconstruction.
Students Experience Summer Internships at Volkswagen

In the summer of 2015, Kacton DeVoti and Kalissa Ervin, majors in the Department of Modern Foreign Languages and Literatures, were the first two students with German language skills to take advantage of the opportunity for paid summer internships at Volkswagen Chattanooga (VWC). Both students learned about the opportunity in a summer internship recruitment event held on campus by Volkswagen and were subsequently offered internships for the summer of 2015.

The Department of Modern Foreign Languages and Literatures has a longstanding concentration in Language and World Business (LWB) under their major, but this is the first time internships have been available at VWC. Lisa Parker, assistant director of LWB, collaborated with the German program faculty, Stefanie Ohnesorg and Dan Magilow among others, began cultivating relationships with VWC last year. Their goal was to develop opportunities for their students of German language and culture to gain practical experience and the professional emphasis to be competitive in an ever increasing and challenging global market. They were delighted when VWC agreed to offer internships.

Kacton remembers the interview for the summer internship was conducted in English and German by a panel of managers and described it as a “daunting” and “grueling” experience. Happily, he was offered an internship position on the IT & Services team in General Purchasing at VWC. Once hired, he was given significant responsibility—including a chance to give a presentation in German to the board and Chief Financial Officer.

Working in a setting where about 65 percent of his coworkers spoke German, Kacton learned about everyday use of the German language, particularly terms applicable to the corporate setting.

“Most importantly, I learned a lot about what it means to be on a team and how to conduct business with others,” he said. “This internship was an amazing opportunity, in which I was able to use much of my German skill, knowledge of German society, and general business skills to further my experience in a practical setting.”

The summer internship has already paid off for Kalissa Ervin who has graduated from UT and is employed in a regular full-time position as Commodity Associate in Purchasing at VWC.

Kacton is currently continuing with his coursework at UT and is hoping to have an opportunity to complete a second internship at VWC or maybe at VW headquarters in Wolfsburg, Germany before he graduates.

Looking to the future, he sees these internships as a pathway into a regular job after graduation and hopes VCW management shares his view.
COMMUNITY ENGAGEMENT

In the spirit of UT’s land-grant mission and Carnegie classification, faculty and their students are engaged in exchange of knowledge in multiple mutually beneficial partnerships that improve people’s lives and address problems both locally and across the globe. These collaborations support our vision to produce graduates who are innovative citizen leaders and difference-makers.

Partnering to Improve History Teaching in East Tennessee

Faculty from the UT Department of History collaborate with public school teachers and administrators in rural, under-resourced counties in East Tennessee to provide content enrichment for the teaching of history. This partnership has given rise to lectures, teaching workshops, reading groups, field trips, and collaboration on National History Day. The East Tennessee Historical Society (ETHS) provides program support and financial administration, allowing UT faculty and local school teachers to focus on curriculum design, shared training in pedagogy, and presentation. Improved teaching of history in East Tennessee’s rural schools produces more high school graduates ready to succeed at the college level. Moreover, ongoing assessment has confirmed improved scores on standardized history tests for both teachers and their students who participate in the program.

Community partners included the ETHS and regional school districts and schools.

UT partners included the Department of History and the College of Arts and Sciences.
The Forensic Anthropology Center (FAC) offers training to law enforcement personnel at the world’s first natural outdoor lab developed for forensic studies, as well as assists with identification of remains. FAC members also work on international recovery efforts and assist law enforcement personnel and medical examiners with human remains recovery and identification.

Furthermore, FAC faculty and their students have enriched the current forensic science curriculum in public and private schools throughout the Southeast with various outreach efforts, including Forensic Files, a program that engages high school students interested in forensic science by providing lively presentations and hands-on forensic anthropology exercises. The FAC also offers a two-week internship for selected high school students of Knox County Schools (Tennessee).

Community partners include the Knoxville Police Department, Tennessee Bureau of Investigation, Oak Ridge National Laboratory, Kentucky State Medical Examiner’s Office, Rural Metro Corporation, the Federal Bureau of Investigation, Kentucky Criminalists Association, Georgia Bureau of Investigation, UT Medical Center at Knoxville, Keele University (UK), DuPage College, Ferrum College, and Knox County Schools (Tennessee).

UT partners include the Department of Anthropology, the Archaeology Research Laboratory, the Department of Chemistry, the College of Veterinary Medicine, and the UT Institute of Agriculture.
Community Partnerships with the Arts Programs

UT’s Community Partnerships with the Arts Programs aim to put students and faculty into the public arts arena and to invite public interest in UT arts venues. Professional and community arts programs in the Knoxville area could not function without the involvement of the university’s faculty, staff, and students. In turn, community arts programs help the School of Art, the Department of Theatre, and the School of Music recruit top-notch students and faculty by offering them professional placement opportunities in the local community.

Community partners include the Knoxville Symphony Orchestra, Knoxville Opera, community-based professional and nonprofessional actors, community-based professional and nonprofessional choral groups, Downtown Gallery, and Gallery 1010.

UT partners include the College of Arts and Sciences, the School of Music, the School of Art, and the Department of Theatre.

Centro Hispano

A broad-reaching partnership connects Centro Hispano to many UT colleges and departments. Centro Hispano de East Tennessee is a community center developed by the Latino Task Force and its umbrella organization, the Community Economic Development Network of East Tennessee, and serves as a gathering place for the growing Hispanic population in our community. UT's partnership with Centro Hispano offers undergraduates with advanced-level Spanish the opportunity to apply their language skills outside of the classroom in community programs designed to serve the needs of many Hispanics. Centro Hispano has enabled UT students to make a stronger connection between their formal education and their role as a socially responsible citizen. It is a mutually beneficial arrangement—students receive training and experience that enhance their professional skills in an increasingly bilingual country, while the local Hispanic community benefits from essential services that are not easily accessible to non-English speakers and new arrivals in our community. Community partners include Centro Hispano and other local community organizations that serve the Hispanic community. UT partners include the Department of Modern Foreign Languages and Literatures in the College of Arts and Sciences, International Service and Culture Programs, the College of Law, and UT Service-Learning (Office of Provost).

Source: UT Office of Community Engagement and Outreach engagement@utk.edu
Founded just three years ago, the Neuroscience Network of East Tennessee (NeuroNET) is now a UT Research Center directed by Rebecca Prosser, professor of biochemistry and cellular & molecular biology in the college and involving twenty-five arts and sciences faculty from different departments in the college—as well as faculty from seven other UT colleges, and members from UT Medical Center in Knoxville (UTMCK), the UT Health Science Center in Memphis, Oak Ridge National Laboratory (ORNL), and other community partners. NeuroNET members are engaged in cutting-edge interdisciplinary research in the burgeoning field of neuroscience, focusing on general cognitive development as well as aging and dementia, stress, addiction, anxiety disorder, and Post-Traumatic-Stress-Disorder (PTSD).

One of the most exciting outcomes of NeuroNet was the creation of an undergraduate concentration in neuroscience housed in the Interdisciplinary Programs Major within the College of Arts and Sciences.

The School of Music, an All-Steinway School, is housed in the Natalie L. Haslam Music Center—a new state-of-the-art facility. The school is respected throughout the country for their superb facilities and excellent teachers. Their graduates of the Opera Program appear regularly in the top performance venues in New York and throughout Europe.

WILLIAM M. BASS
FORENSIC ANTHROPOLOGY BUILDING

The first forensic anthropology center in the country was founded at UT in the anthropology department by Professor Emeritus William Bass.

Presently, the Forensic Anthropology Center is ably led by a nationally renowned forensic anthropologist, Professor Dawnie Steadman. She and her faculty colleagues continue to be involved in cutting-edge research while training graduate students in research, and law enforcement professionals in important data collection skills. The center affords many resources for students, researchers, and law enforcement agencies.
DONORS
The investment of generous alumni and friends enables us to extend opportunities to deserving and talented students, and to recruit and retain top-notch faculty who inspire and mentor them. Private support makes possible new buildings and classroom technology and experiential learning opportunities that enhance the educational experience of our students.

Timothy Deidesch and Mohammad Moniruzzaman are the first two recipients of the Penley Fellowship which provides a graduate student with resources to pursue a research project or creative endeavor of exceptional promise.

Vested in Promise

Timothy Deidesch’s footing has not always been as solid as a rock.

Hard-headed lessons came from landing on academic probation, and ultimately suspension, from a California state university, where he began with the end in mind—earning potential—not his passion.

With college-educated parents—his mother was in her fifties when she received her bachelor’s degree—failure was not an option. He built a new foundation by changing majors and enrolling in a community college in the Sacramento area.

“This was my academic rebirth,” he says. “I took a general education science class—geology—where most of the labs consisted of short field trips to look at different rock formations around the central coast of California.

“Wait a minute, there’s an area of study that not only allows you, but requires you, to be outdoors most of the time?”

His world shifted, and geology was at the center of it all.

With a bachelor’s degree in geology from Sacramento State University and a master’s in geosciences from Idaho State, Diedesch is at the cusp of defending his dissertation for his doctorate degree from UT’s Department of Earth and Planetary Sciences.
Studying surface exposures of large rock formations known as gneiss domes, Diedesch has lived in pockets of the Himalayan Mountains—which are rich in these structures—to understand the middle and lowest layers of the Earth’s crust. The Lhagoi Kangri gneiss dome, 100 kilometers north of Mount Everest, had never been studied before the work of Diedesch and Micah Jessup, his advisor and associate professor of structural geology and tectonics.

Unraveling the secrets of the Himalayan geologic history, dating back nearly fifty million years to the collision of the Indian and Eurasian tectonic plates, came to fruition for Diedesch because of the Charles and Connally Penley Fellowship, available to graduate students in the College of Arts and Sciences.

“The fellowship is a reminder that philanthropy encompasses more than its traditional role as a means to improve the quality of life of the beneficiary,” explains Diedesch. “There is no doubt that the fellowship in the short term has eased my burdens of graduate student life and in the long term has helped me accomplish research goals that will make me more competitive for employment. However, the fellowship has also provided me the opportunity to contribute intellectually to my discipline, in turn, improving the general understanding of Earth’s processes.”

The $10,000 fellowship has also carved out a way in the Department of Microbiology for doctoral candidate Mohammad Moniruzzaman. Moniruzzaman examines how viruses interact with marine algae, which is one of the culprits of brown tides in coastal waters that equate to $50 million in damages annually to the US shellfish industry.

“Without the fellowship, the experiments I proposed wouldn’t have been possible,” says Moniruzzaman, who sees himself as “a leaf of a much bigger tree.”

“Science needs philanthropists and enthusiasts who will come forward to support it, and the Penleys did just that by impressing this idea and strengthening my conviction that science will move forward despite any limitations.”

Tangible partners in scientific discoveries, medical oncologist W. Charles Penley (Microbiology ’78), and his wife, Connally, are vested in graduate education. They established the Penley Fellowships because they believe creative innovation leads to great promise, which ultimately can change the landscape of humanity.

“I found my calling. My end goal now is to recruit, teach, and inspire a whole new crop of geo-nerds,” says Diedesch.

-ChANDRA HARRIS-McCRAY
Impactful Results

Paying it forward placed the Department of Geography on the map for Neil Conner.

A mostly privately funded cushion of financial support adds to the robust learning environment of the doctoral geography student and teaching associate.

Studying cultural and political geography, Conner is afforded the opportunity to conduct research abroad. He blends his travel through thirty-four countries into every Geography 101 lecture.

His dissertation research about national identity in Ireland has been recognized and supported by a McClure Scholarship, a departmental McCroskey Award, a Science Alliance Fellowship, and a Seaton Graduate Fellowship.

His exceptionalism as an educator has not only attracted financial support for his research endeavors, but also awards. In 2015 Conner was named one of ten recipients of the highly competitive K. Patricia Cross Future Leaders Award sponsored by the Association of American College & Universities. He received a UT Chancellor’s Honors Award for his teaching excellence in 2014.

Seeing firsthand the impactful results of Conner’s efforts, Kurt (Knoxville ’84, ’86) and Susan (Knoxville ’81, ’85) Butefish have made sure a significant portion of their estate plan includes the geography department.

“As graduates of such a fine department and practicing professionals in the field of geography,” says Butefish, “Susan and I remain intimately connected with the department.” Butefish is coordinator of the not-for-profit Tennessee Geographic Alliance (TGA) which advances geographic literacy throughout the state. The TGA is based in the Department of Geography and housed in the Burchfiel Geography Building where Butefish has daily interaction with faculty and students. He also serves on the board of directors of the Tennessee Geographic Information Council, the largest state-level organization for geospatial professionals which includes many UT geography graduates.

Susan Butefish is a geographic information systems technician who works in economic and community development. “I am editor of the department’s newsletter, so I get to interact with alumni who are doing amazing things,” adds Butefish. “These various roles give me the opportunity to experience daily how our graduates are solving real-world problems and helping companies, organizations, and governments work more effectively and efficiently. It may seem to be cliché, but it really is true—our graduates are making a difference and changing the world for the better. Susan and I have enough confidence in the future of the Department of Geography and its positive impact on students like Neil Conner that we are willing to give back.”

Conner is grateful for the support he has received. “Every investment in my research by generous individuals like Kurt and Susan makes me a better teacher and researcher,” explains Conner.

Anything but a memorization game of capitals and rivers, “what I do and teach is connected to the world’s environmental and social issues,” says Conner, who taught high school geography for five years in Virginia Beach, Virginia before enrolling in graduate school. He has a bachelor’s degree in history and education from the University of Arizona and a master’s degree in international studies from Old Dominion University. In the summer of 2015 he was awarded a doctorate in geography from UT and has been working in the department as a lecturer since then.

“I give back to my students by helping them explore the possibilities of geography as a major and the career options connected to it. They see, through me, how geography opens doors to the world.”

Conner’s educational impact will be magnified next fall as he becomes a teacher of teachers. He has accepted a tenure-track position as assistant professor of Geographic Education—a joint appointment in the Division of Social Studies & History and Teacher Education, Leadership, & Research—at Delta State University.
Fine-tuning

At five, Benjamin Parton simply wanted to be like his older violin-playing brother. His competitive streak of simply wanting to be better at strings than his brother waned as he honored his calling as a musical prodigy.

Submersed in a gene pool of musical talent, Parton’s mother plays the piano and his guitar-picking father was known for strumming to Parton and his three siblings while in the womb.

“Music has always been there,” says Parton, “and through the years, I just became more determined to be a violinist.”

By seven, bedtime visions were of the world-famous Carnegie Hall through a framed picture that hung over his bed. A decade later, at seventeen, Parton took his long awaited bow on the stage of Carnegie Hall, after leaving the mountains of Sevierville to board a plane for the first time as one of 120 teenage musical geniuses of the National Youth Orchestra of the United States of America.

Along with racking up frequent flier miles for two summers, Parton “fulfilled his childhood dreams” of performing across the country and Europe in the company of world-renowned violinists Joshua Bell, Gil Shaham, and Vadim Repin, and conductors Valery Gergiev and David Robertson.

He nailed the concertmaster experience for the most advanced ensemble of the Knoxville Symphony Youth Orchestra during his last two years of high school before claiming UT as the place he would study violin performance.

A sophomore, Parton continues to get a taste of what he wants his full-time, after-college gig to be as the concertmaster of the UT Symphony Orchestra.

UT could have easily been replaced by the Cleveland Institute of Music if it had not been for the Carol and Robert Aebersold Endowed Scholarship for the School of Music. Created for students who otherwise may not have had the opportunity to pursue college, let alone their music dreams, the scholarship is a bridge of possibility for students like Parton.

“It made all the difference,” explains Parton of the scholarship. “One of the hardships of having a music education throughout the years is cost. For someone like me, who does not come from a financially well-off family, it has always been hard to find ways to provide for lessons, travel, new instruments, and accessories, so it’s a big deal that my family is not carrying the burden of my college education.

“I will graduate having received the best quality education in my own backyard without the stress of paying student loans. Giving makes humanity prosper, and I am thankful to be on the receiving end of it.”

- CHANDRA HARRIS-McCRAY
The late Ken and Blaire Mossman valued learning and discovery and their experience as students at the University of Tennessee, Knoxville, where they met and fell in love. They remained deeply connected to the university, particularly the College of Arts and Sciences, throughout their lives. Not surprising, their estate gift to the university follows their heart and creates a legacy that reflects their values and will have broad and enduring impact on education.

The Mossmans credited their experience at UT for laying a broad foundation for their careers, but their affinity for UT stretched beyond professional. Ken and Blaire first met on campus in 1968 at the university’s chapter of Hillel Foundation for Jewish Life and were married in 1970. Another reason the university would forever hold a special place in their heart.

Blaire graduated with a degree in French in 1971 and had a lifelong love of foreign languages. She had a successful career as an editor for science and technology publications.

Ken came to UT in the late 1960s because of UT’s relationship with Oak Ridge National Laboratory and UT’s Institute for Radiation Biology. He earned a master’s degree in 1970 and a doctorate in health physics and radiation biology in 1973. Over the course of his career he achieved national stature for his contributions in science and education.

As graduates of the College of Arts and Sciences, the college was the point of continuity in their connection with the university. Ken served on the Dean’s Advisory Board from 2001 until his passing. Blaire joined Ken at these meetings where both of them listened with keen interest to reports on the advancement of the university and the college, lectures by outstanding faculty, and student presentations about their studies, travel abroad, and research. Ken and Blaire contributed great ideas, offered sound advice, and were passionate advocates and supporters for many years until their passing. They embodied the Volunteer spirit!

The specific allocations of their bequest reflects the breadth of their interests as well as their desire to provide great experiences for future students and faculty. Their gift established an endowed professorship in biomedicine, a distinguished lecture series, and scholarships for undergraduate students majoring in Romance languages to fund their travel and study abroad.

Currently held by Steven Wilhelm, professor of microbiology, the Mossman Professorship is based in the College of Arts and Sciences and is intended to serve as a magnet to attract talented faculty and students to study in the college. Wilhelm says the value of the professorship can be summarized in a word—opportunity. “The gift creates opportunities for my graduate students and lab members to venture into areas of research that might seem preliminary or risky on the surface, but that is where some of the potential great discoveries lie. Already the gift has supported and continues to support our work demonstrating that the microbiome modulates the severity of malaria and we are now attempting to uncover the mechanisms involved. Often these studies take years to gain support from federal funding sources. We’re able to carry out this research now, accelerating the rate of discovery.”

The first five undergraduate Mossman Scholars are studying abroad at the time of this publication: Hannah Berry (Navarra, Spain); Susannah Ward (Vigo, Spain), Rachel Crocker (Caen, France), Kasey Sumeriski (Cuzco, Peru), and Yelena Aliy (Costa Rica). The Mossman Scholars have the opportunity to engage in international travel for language study with financial support for travel expenses, tuition, books, and other related educational expenses. The endowment supports as many as ten scholarships annually.

The Mossman Distinguished Lecture Series funds a distinguished scholar in any academic discipline to deliver a public lecture to the community at large and a scholarly or technical lecture to faculty and students in a department closely associated with the speaker’s academic discipline—affording an intellectual enrichment opportunity for the entire campus and local community. The inaugural lecture was presented in October 2015 by nationally renowned Bill Nye the Science Guy to an audience of nearly 8,000.
In recognition of the Mossmans’ generosity, the university named a new building in their honor—the Ken and Blaire Mossman Building. Located on Cumberland Avenue, the building is scheduled to open by fall 2018. A state-of-the-art research and teaching facility, it will have six floors and will house portions of several departments: microbiology, psychology, nutrition, and biochemistry & cellular and molecular biology (BCMB). “Having space in this building will be transformative for our department,” observed Dan Roberts, professor and head of BCMB. “In addition to enhancing our research activities, the design of the teaching facilities which include experimental computational laboratories and interactive classrooms affords faculty the opportunity to engage in the newest teaching pedagogies which will really boost our instructional mission.”

Ken’s younger brother, Michael Mossman, also a UT alumnus, spoke of his late brother and sister-in-law on a recent visit to campus. “They were accomplished. They were academics; they were bright. But at the heart of things they were good people who were interested in education, interested in paying things forward,” Michael Mossman said. “They didn’t have children. This was their legacy.”

And what a legacy it is! The magnitude of their vision is far-reaching and enduring. The targeted funding of opportunities for students and faculty infuses the Mossmans’ vision and spirit throughout the academic enterprise, fostering discovery, teaching and learning, as well as global education and awareness.

Author David Solie defines a personal legacy as “the unique footprint we want to leave for our time on earth.” The Mossmans’ legacy is one of extending opportunities to faculty and students for generations to come.

“I already feel as if three and half months is not enough time in Peru for me. During my Mossman Endowment-supported study abroad experience in Peru, I have become a more globally-aware and flexible person. My experiences in Peru have positively challenged me to reevaluate my perspectives and opinions about the world. The interactions I have had with all different types of people from those in rural communities to nationally recognized professors have sharpened my critical-thinking abilities and expanded my knowledge of current local, regional, national, and international issues in Peru. In doing so, this experience has expanded my horizons by introducing me to new and challenging opportunities for academic research and work in the future.

Thus far, my favorite experience, besides the people and culture in Peru, is going to a new place and taking a moment to observe all that I can with only my eyes. Then, closing my eyes to listen to the sounds, take in the smells, and feel a breeze or even sometimes the rain.”

“Studying abroad has been one of the most challenging, but fulfilling experiences of my life,” says Kasey Sumeriski, Mossman Scholar.

Photo caption: Kasey enjoys “juane”, a traditional Amazonia meal, with the community members of Victoria, a small indigenous community in the Madre de Dios region of the Amazon Rainforest, Peru. This meal consists of chicken, rice, plantain, onion, and egg. Before eating, she spent time talking with the community president and hiked out to see the community’s “chakra”, an area used for farming. After eating, she played a game of soccer with the children in the community. In the following days after visiting with this community, she travelled to another indigenous community in the Amazon – Community Infierno – where she spent four days and three nights learning about their culture, working in the chakras, and visiting different places in the community, including the school and clinic.
301
Graduate Degrees Awarded for Fiscal Year 2015
PhDs/MFA - 172, MA/MS - 129

2320
Undergraduate Degrees Awarded for Fiscal Year 2015 (including minors)

Growth in Undergraduate Enrollment Declared Majors and Minors

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% of change: 3.5%

- Undergraduate enrollment is up 3.5% from 2014-2015.
- There is a rising number of students earning minors and completing second majors. Two years ago 8% were earning multiple degrees. Currently, more than 30% of students are earning multiple degrees.
In Fiscal Year 2015, the College of Arts and Sciences had available resources of $136,992,931 in unrestricted and restricted funds. The college’s recurring base budget allocation of $70,078,937 provided the largest portion of these resources. Most of the remaining resources came from external sources such as federally sponsored research grants and contracts, nongovernmental grants, endowment income and annual gifts from donors, and revenue from summer school and educational services such as the Clarence Brown Theatre.

### College of Arts and Sciences

#### Sources of Funds

- **51%** Recurring College Budget (from state allocation and tuition)
- **16%** Grants and Contracts, net of Carryover
- **4%** Endowment Income and Annual Gifts
- **2%** Governor’s Chairs/Centers of Excellence
- **2%** Additional Central Support (benefits, funding transfers)
- **2%** Summer School Revenue
- **2%** Revenue from Educational Services
- **5%** Additional Instructional Funding from Central Administration
- **2%** Net Facilities and Administrative Cost Recoveries
- **2%** Governor’s Chairs/Centers of Excellence

#### Fundraising totals for five years. *

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*Source: The University of Tennessee Foundation*
College of Arts and Sciences
Expenditures by Category

- 19% Staff Benefits
- 12% Operating
- 2% Equipment
- 42% Faculty Salaries
- 12% Graduate Teaching Assistant & Graduate Research Assistant Stipends
- 6% Professional Salaries
- 5% Clerical and Technical Salaries
- 1% Administrative Salaries
- 1% Student Employees
The College’s Greatest Asset: Our People
Salaries and benefits accounted for eighty-six percent of all expenditures in Fiscal Year 2015. Here are some of the faculty, students and staff who contribute to our mission.

Faculty
Includes Assistant, Associate, and full Professors, Governor’s Chairs, Distinguished Scientists, Lecturers, Senior and Distinguished Lecturers, ORNL Joint Faculty, Research Faculty, Clinical Faculty, Post-Doctoral Teaching Associates, Artists-in-Residence.

Graduate Teaching and Research Assistants
Graduate Teaching Assistants are graduate students who provide instruction in labs, lead discussion sections, serve as tutors and graders. Graduate Research Assistants perform research and are supported by grants and contracts.

Professional Staff
Includes Advisors, First Year Coordinator, Lab Directors, Editor, Business Managers, Webmaster, Accountants, IT Professionals, Electronics Specialists, Greenhouse Manager, Grants and Contracts Coordinators, Curator, Senior Technical Director, Research Associates, Communications Director, Budget Director.

Clerical and Technical Staff
Includes Piano Technician, Glassblower, Media Assistant, Grant and Research Specialists, Costumers, Graphic Designers, Carpenters, Model/Exhibit Preparators, Craft Specialists, 3D Area Technicians, Sound Engineers, Scenic Change Artist, Administrative Assistants, Accounting Assistants, Music Librarians, Auditorium Coordinator, Box Office Manager, Undergraduate Secretary, Graduate Secretary, Materials Control Clerk, Data Entry Operator, Laboratory Machinist, Program/Resource Specialist.
In 2012 we revised our strategic plan for the college and its academic units with the vision of becoming a Top 25 college of arts and sciences. The next step was a "gap analysis" at the college and departmental levels to determine the resources essential for the college to align with the arts and sciences colleges in Top 25 institutions. The "gap analysis" was attached to each of our strategic goals with a dollar figure attached to closing the gap in each strategic area.

The progress reported in the pages of this report reflects a return on the investment of alumni and friends who believe in our vision and want to make a difference in the lives of our faculty and students. We have, indeed, made progress toward closing the funding gap, but we are still short of our goal. In the current educational landscape, we cannot rely on state funding and increases in tuition to generate the resources needed. We must rely on private support to help close the gap.

We have identified five key areas where investment can have a transformative effect on our college and the university—faculty awards, undergraduate student support, graduate student support, strategic opportunities, and annual support.
THE JOURNEY CONTINUES.

Join us!

FACULTY AWARDS
To advance in a competitive higher education environment, we will recruit, retain, and support top faculty who will teach, mentor, and challenge our students and will pursue high impact innovative research and creative activity. Achieving this goal requires hiring an additional fifty faculty to move towards a Top 25 student to faculty ratio, and providing the means to reward and retain high-achieving faculty with recognition awards and endowed professorships and chairs.

UNDERGRADUATE STUDENT SUPPORT
To increase the number of students who can participate in experiential learning opportunities such as study abroad, service learning, research, and master classes, securing additional need-based endowed scholarship support is critical. Endowed scholarships also help attract and graduate a higher number of “top choice” students preparing to take their place in a global society as engaged citizen leaders. Such philanthropic investment enables students to expand their worldview and create more options for their lives.

GRADUATE STUDENT SUPPORT
To leverage our competitiveness in attracting “top choice” graduate students in all disciplines, additional endowed funds will not only provide higher graduate student stipends, but also offer students research awards and assistantships. With adequate financial support, students are able to focus more intensely on their graduate studies and research and to achieve the credentials and confidence for an early and successful launch into their careers.

STRATEGIC OPPORTUNITIES
To advance the college’s strategic goals for Top 25, lead gifts and recognition opportunity investments for new programs and facilities will support high impact programs such as the UT Humanities Center. To provide an environment that supports excellence in achievement, we must provide our stellar faculty and their students with state-of-the-art teaching and research facilities.

ANNUAL SUPPORT
To strengthen and sustain the college’s capacity to reliably make short-term strategic investments that advance students, faculty, and programs, the number of annual donors and unrestricted gifts must increase.

In conversations with our alumni and friends, I sense their passion and commitment to the college and their pride in being a graduate of UT’s flagship university. They see the university and the college are better than they were five years ago when we began the journey to the Top 25, and they want to see that progress continue.

We have made significant progress, but our journey continues on. We will reach our destination, one milestone at a time. Each of the strategic areas of investment represent milestones along our path of improvement. With our alumni and friends as our sustaining partners on the journey, we will realize our great potential.

Join us on our journey. Imagine the progress we can make together!

Theresa M. Lee, Dean