On behalf of the entire Division of Academic Affairs at the University of South Carolina, I am proud to present this year’s edition of Vision, Innovation, Practice, featuring the 2019 winners of the university’s most prestigious awards for teaching. The leaders of our world-class faculty identified here represent a wide range of disciplines and differ broadly in their individual styles and classroom methods, but they share an authentic commitment to their students and the ability to discover innovative and effective ways to convey their passion, compassion and knowledge in the classroom, lab or studio.

Inventive teaching is the primary focus of the Garnet Apple Awards program, now in its fourth year. Sponsored by the Office of the Provost and the Center for Teaching Excellence, these awards recognize faculty members who consistently and successfully incorporate the latest developments in teaching into their practice. The 2019 Garnet Apple winners have applied imagination and curiosity in their instructional modalities in order to create transformative impact across a broad range of pedagogies. As a result, these faculty members continue to advance the university’s national and global reputation for teaching innovation, demonstrating that we can achieve excellence when you are intentional to help make a difference in the lives of others.

Congratulations to all of our 2019 Garnet Apple, Mungo, Clinical Practice, Duffy and Graduate Teaching Assistant award winners. Our entire Carolina community stands in appreciation of these distinguished faculty members.

TAYLOE HARDING
Interim Provost
The Garnet Apple Award honors exceptional faculty members who demonstrate a commitment to best teaching practices and an ongoing record of developing innovative strategies to enhance student learning in their courses.
Reg Bain and Jeff Dudycha

Professor
SCHOOL OF MUSIC
Professor, biological sciences
COLLEGE OF ARTS AND SCIENCES

What does a gene sound like when it mutates? That seemingly absurd question is one that biology and music students work together to answer in a course that combines big data and sound to let researchers “hear” a mutation. The course, created by Reginald Bain and Jeff Dudycha, is part of a National Science Foundation-funded research project the pair are working on that looks at the mutational variance of the transcriptome and the origins of phenotypic plasticity — just hum along if you don’t know the lyrics here. For the class, biology majors team up with composition students to complete projects using computer-generated music to represent spontaneous genetic mutations. “It was the best teaching experience I ever had,” says Bain. “We had no idea of what the students could reasonably accomplish,” Dudycha says. “Reg and I were flying by the seats of our pants.” But the student projects were so successful that one of the biology majors is extending her research to become her Honors College thesis. And Dudycha and Bain plan to offer the class again next year.
Karen Edwards enjoyed successful careers in retail management and as an attorney, but once she started teaching, she was hooked. What truly lit her fire as an educator was a weeklong active learning workshop she attended early in her career at the university. “I think I did a pretty good job that first year, but once I was tooled up it was like, ‘Bam! Now I know what to do!’ Teaching was fun before, but then it just became amazing.” But Edwards didn’t just enjoy teaching; she enjoyed the process of becoming a better teacher. She enjoyed the scholarship of learning, trying out new classroom strategies, informing her own efforts with research-based practices. Eventually, she would serve a two-year term as the Center for Teaching Excellence associate director for online learning pedagogy, a position that helped her hone her own classroom skills while also helping her colleagues better their own practice. “What’s more rewarding,” she asks, “than having somebody come back and say, ‘Thank you so much. That was a great idea you shared’?”
Given his academic discipline, it’s probably no surprise that Ed Gatzke has worked on engineering a method for improving the drop-fail-withdraw rate in a key course for freshman engineering majors. Engineering Modeling and Numerical Methods is tough because students can’t use a cookie-cutter approach to problem solving. Using a grant from the Center for Teaching Excellence, Gatzke exchanged the traditional lecture format for a flipped classroom model with students watching lectures online and using class time for quizzes and solving problems with the professor. “I provide the students with printed copies of the lecture notes with fill-in-the-blank components,” he says. “Students have thanked me for that, saying it keeps them engaged while they watch the lectures — it forces them to pay attention and it’s more active learning.” In Chemical Process Dynamics and Control, Gatzke has introduced hands-on experiments into the teaching mix that help students visualize the mathematical concepts they’re trying to apply. “When they actually see the sensors and the valves moving and they see numbers on the screen changing with time, it’s a lightbulb moment,” he says.
When Bridget Miller was in graduate school, a mentor opened her eyes to science education. Now she’s doing the same with future teachers in her classrooms. “My mentor was so excited and passionate about what he did, and that made me so excited and passionate about it, too. I try to do that with my students as well,” Miller says, who asks her students to reflect on their own experiences with science. “A lot come in with anxiety, saying, ‘I’m not good at science. I’m not good at math.’ I try to make sure that by the end of the class they’re not only feeling more comfortable with it, they’re excited about it.” Some of that comes from Miller’s enthusiasm for the topic; some is her ability to make topics like science less intimidating. “When I went through school, science was memorization of facts and terms. That’s not necessarily what science is. Little kids are inquisitive, and they ask a million questions. How do we help them explore?”

Bridget Miller
Assistant professor, instruction and teacher education
COLLEGE OF EDUCATION
You won’t find Thomas Nathaniel’s clinical neuroscience students passively watching PowerPoint slides or their professor droning at a lectern. That’s because Nathaniel takes a different approach to learning. “My job is to help them navigate medical school by allowing them to play major roles in the learning process.” As director of the school’s clinical neuroscience module, he often puts students in small groups where they become major players in the learning process. He gives them the details on actual clinical cases involving neurodegenerative diseases and asks them to look for clinical solutions. “They learn together, and they learn from each other,” he says. “I am just a facilitator of their learning process.” Nathaniel is keenly interested in providing his students with a foundational understanding of various neurological diseases such as dementia, stroke and Alzheimer’s that his students will encounter in residency and beyond. “We want our students to understand where the problem is in the brain for each particular disease or condition. If you know where the problem is, then you have an idea where the medication can target it.”
Students who successfully complete Laura Smith’s “Power Producing” course often find themselves in high demand when they’re ready to graduate. “The industry has caught wind of the fact that we are producing producers, and they’re coming to us and asking about the students who are coming out. Many of them get job offers before they graduate.” Part of what makes the students so marketable is the fact that their instructor has a wealth of television news experience under her belt and a hands-on teaching style that’s intensive and effective. “They have to get used to being critiqued in public because that’s the nature of what we do — the public is going to critique it, our bosses are going to critique it.” That crucible experience is challenging but necessary, Smith says, and it’s aided by the extensive feedback and one-on-one time she offers to each student. “For everything we hear about the death of journalism, it’s going through seismic shifts, but it’s really thriving and local journalism has never been more important. I’m very excited about teaching it here.”
The Michael J. Mungo Distinguished Professor Award, Undergraduate Teaching Award and Graduate Teaching Award recognize faculty members who have a sustained record of excellent teaching. The awards were endowed by the late Michael J. Mungo, a USC graduate and Columbia businessman who served with distinction on the university’s Board of Trustees from 1968 until his death in 2010.
When Donna Chen first taught physical chemistry, the mood among students could only be described as bleak. The course has a reputation for being extraordinarily difficult to understand, and students steeled themselves from day one. “They knew they were going to fail all of the exams, and the best they could hope for was that somehow they would get a C in the end,” Chen says. Changing those cynical attitudes took more than a pep talk. “They have to use all of their analytical skills, including previous knowledge of chemistry, physics and math to be able to solve these kinds of problems. It’s become a course on teaching students how to approach problems and think about them in an analytical way.” Adding a recitation hour to the course helped, along with making herself completely available for student help. Nominating her for the university’s top faculty award, a former student wrote: “I have her for CHEM 542, arguably one of the most difficult chemistry classes, and I have never felt so knowledgeable or comfortable about chemistry material.”
Amanda Fairchild

Associate professor, psychology
COLLEGE OF ARTS AND SCIENCES
Michael J. Mungo Graduate Teaching Award

If you think you hate statistics or they make you nervous, you might just be the perfect student for Amanda Fairchild. She is out to demystify statistics for master’s and Ph.D. candidates, who need Fairchild’s courses to complete their degrees but do not always see themselves as numbers people. “Over the years, I’ve come to understand that students simply lack confidence in statistics due to ineffective teaching in their past.” Fairchild believes that a patient and compassionate approach in the classroom helps unpack student angst and incite new curiosity for statistical methods. But her success as a teacher hinges more on the unique perspective that she brings to her subject. “My approach is to teach statistics as a language, with an emphasis on the art of speaking that language well in order to do science well.” Fairchild says her students understand that without good measurement, good research design and good statistical models, substantive study can’t exist. “Even if they don’t love the subject as I do, I know that I am sending them out with a strong statistical foundation.”
Conor Harrison

Assistant professor, geography
COLLEGE OF ARTS AND SCIENCES
Michael J. Mungo Undergraduate Teaching Award

Conor Harrison started graduate school with an eye toward urban planning, but his geography courses led him down a different path that included research and teaching. “I spent my graduate school life looking at issues of energy and energy inequality. Now my teaching revolves around these topics: energy, inequality, economics and how they interact with the environment.” Harrison teaches a variety of courses with a dual appointment in geography and environmental science. But he says he always focuses on making sure his students — be they geography or environmental science majors or other majors fulfilling science requirements — learn how to “read and write and think about problems.” Harrison’s primary goal is simply to introduce students to the research process — and following the advice his librarian mother gave him when he went to college, let them meet the information experts who are there to help them. “I am trying to expose them to these amazing resources at the university — databases with incredible information,” he says. “It’s all part of getting students away from just using textbooks and getting their hands on some primary materials.” 📚
Caryn Outten

Professor, chemistry
COLLEGE OF ARTS AND SCIENCES
Michael J. Mungo Undergraduate Teaching Award

It’s one thing to understand concepts in a textbook, but quite another to apply those concepts to real-world cases. Caryn Outten wants her students to understand human biochemistry and metabolism well enough to diagnose diseases or anticipate outcomes in clinical case studies. That’s not an outlandish expectation given that many of her students plan to go into health-related fields. “It flows from my teaching philosophy to use an active learning approach to better connect biochemical concepts with everyday life,” she says. In her flipped classroom, Outten’s students watch prerecorded lectures before class, then use what they learned to address a related case study. “With this approach they are getting the basic information on their own. During class time, they are applying that knowledge to real-world situations.” Outten also has students create narratives for their cases. “Students work together to design a group wiki outlining a disease or disorder of their choice, complete with patient history, symptoms, diagnosis and treatment. Developing an engaging story for their patients lets them be creative.”
When Meir Muller calls teaching a “life and death occupation,” he isn’t being dramatic. He’s merely underscoring the fundamental importance of good teachers — and of equity in the classroom. “Nationally, 18 percent of our preschool students are students of color, yet 46 percent of the preschoolers suspended or expelled from school are children of color,” Muller says. “Often, the preschool-to-prison pipeline is in the hands of teachers who are expelling these children.” It’s an eye-popping statistic, made doubly relevant in the context of Muller’s own classes. “I need my students, who are about 88 percent white, to start seeing that, and then transforming the way that they interact with children.” For Muller, an ordained rabbi who also serves as principal at the Cutler Jewish Day School in Columbia, it’s critical to meet students where they are. “I try to look at the students holistically, then understand them as people, not just as learners,” he says. “If I understand just a little about them and their lived history, I can tailor my teaching and tailor the content to make it meaningful for them.”
As a hydrogeology professor and groundwater researcher, Alicia Wilson knows the facts about geology and environmental science. But she also understands that isn’t enough for students in her classroom. “You don’t need facts unless you can do something with them. And you don’t remember them unless you can do something with them,” says Wilson. “That’s one of my big goals, to make sure that students at the end of a semester have really learned to do something.” In her numerical modeling class, students don’t rely on other people’s numerical models; they write their own models to answer questions about groundwater flow and transport. “Once you’ve written your own model, you can use somebody else’s model or learn any model because you know what has to go into it,” says Wilson, who tries to make the science come alive for students. “If you can catch their attention and make it interesting, then you’ve done them a service. It’s so easy for a big lecture to be me spewing facts, but the way to build connections with students is to talk with them.”
John J. Duffy Excellence in Teaching Award

The John J. Duffy Excellence in Teaching Award recognizes outstanding teaching at the Palmetto College campuses. The award is named in honor of the longtime history professor and university administrator.
Ray McManus

Professor, English, Director, Center for Oral Narrative

USC SUMTER

As a first-generation college student who became an English professor, Ray McManus understands the stress of many of the students he teaches. He’s used that knowledge and understanding to chart a different course for teaching freshman English classes, an approach that relies heavily on one-on-one conferences to help students become stronger, more confident writers. “We all know that effective communication, whether written or spoken, is essential for leadership, it’s an essential key for advancement.” When McManus was a teaching assistant in English 101 and 102 classes, he moved to portfolio-based grading to help students learn how to strengthen a paper by revising it. At USC Sumter, where he has taught since 2008, he started scheduling one-on-one conferences with students on every major assignment. “Now, when they turn in the papers to me, we meet, we talk about the comments. They see my face, they see that I’m not mad. By providing that friendlier approach, I automatically remove those barriers. We end up having a conversation about the work. They start to develop confidence in their own ideas.”
The Clinical Practice Teaching Award recognizes faculty members for outstanding teaching in clinical practice settings in the health professions, including nursing, pharmacy and medicine.
One of Celeste Caulder’s key goals is to teach her students how to be lifelong learners. They will need that ability to learn something new every day as they venture into the field of pharmacy where there is not always one single solution to a problem, she says. “We can teach the students the basics in the classroom, but I can promise they’re not going to learn everything they need to know about pharmacy in the classroom. Most of the questions they are going to get asked in clinical practice are not the black-and-white questions with a straightforward answer in a textbook. The gray area is where we often live in clinical pharmacy.” Caulder’s job is to teach budding pharmacists how to use what they have learned in the classroom, from textbooks and the sea of medical literature and apply it in real-world situations, where every case, every patient is different. In addition to teaching students how to create pharmacotherapy solutions for their patients, Caulder tries to teach them about the real working world through informal mentoring, role-modeling and building relationships.
Sheryl Mitchell

Clinical assistant professor
COLLEGE OF NURSING

“My passion is teaching nurse practitioner students and empowering them to become the best nurse practitioners and advocates that they can be.” As a teacher in the online family nurse practitioner program, Sheryl Mitchell says her job is “to help prepare the next generation to go out into the profession. And, for me, to keep my professional skills sharp as I have to keep up with the latest treatments so I can prepare my students.” That includes making sure nurse practitioners understand the role for which they are being prepared, since it requires advanced skillsets. Mitchell has incorporated innovative teaching methods into her courses and provided advisement and career counseling to students. She also recently finished her term as president of the South Carolina Nurses Association and will be inducted as a fellow in the American Association of Nurse Practitioners this summer. “Being a seasoned clinician with an extensive network, she is a tremendous asset to our students, program and nurse practitioner workforce,” says College of Nursing Dean Jeannette Andrews.
Educational Foundation Outstanding Graduate Teaching Assistant Award

The Educational Foundation considers nominations each year for two outstanding teaching/instructional graduate assistants: one in humanities, social sciences, education and related professional programs and one in science, math and related programs.
Sarah Judge, a Ph.D. candidate in accounting in the Darla Moore School of Business, has taught Accounting 401, a required course for undergraduate accounting majors. She concentrates on engaging with students and mentoring, helping them to define their next steps beyond graduation. “I try to make the material relatable and emphasize understanding the ‘whys’ rather than merely memorizing the material. I like seeing when their eyes light up when it clicks.”

Robert Vandermolen, a Ph.D. candidate in mathematics, has taught finite mathematics and several levels of calculus and helped develop a problem-based learning curriculum for a pre-calculus course. He also developed software that tracks how long an instructor waits after inviting questions during a lecture. “It’s a tool for instructors to reflect on how much time they’re allowing for questions. You think you’re going slow, but students often think you’re going too fast.”
As you can see from the work of the honorees of this year’s teaching awards, there are many paths to excellence in teaching. The one thing that all of these outstanding teachers have in common is a commitment to the highest-quality education for our students. Their passion for teaching and ability to successfully adapt and build upon cutting-edge best teaching practices is representative of the outstanding faculty of the University of South Carolina.

The Center for Teaching Excellence is dedicated to sharing both the spirit of innovation and the practical lessons in pedagogy offered by these honorees. You can visit our website, sc.edu/CTE, to learn more about these honorees, as well as grant programs, learning communities, workshops, short courses, webinars and instructional design services that can help you in your pursuit of excellence in the classroom.

AUGIE GRANT
Director, Center for Teaching Excellence