

Nomination of Dr. Peggy Brickman
Felton Jenkins, Jr. Hall of Fame Faculty Award
2025

Department of Plant Biology
Franklin College of Arts and Sciences
University of Georgia

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November 3, 2025

Dear members of the selection committee:

I strongly recommend Dr. Peggy Brickman for the Regents' Felton Jenkins, Jr. Hall of Fame Award. Dr. Brickman is a singular force in undergraduate education whose career exemplifies the highest standards of faculty excellence and devotion to student growth. Since being awarded the Regents' Scholarship of Teaching and Learning Award in 2007, her achievements continue to demonstrate sustained and intentional work to advance the quality and practice of teaching and learning. This commitment is best illustrated by her transformation of BIOL 1103 (Concepts in Biology), a foundational course for non-science majors, into a problem-based, active learning course engaging 450–600 students per semester. Furthermore, her decision to publish her curriculum, including validated learning objectives and over 2,000 assessment items, on the Codon Learning platform extends her high-structure, evidence-based instruction to countless students and faculty nationally.

Dr. Brickman's classroom methodology is defined by the implementation of evidence-based, student-centered instructional approaches designed to enhance comprehension and retention. She achieves this by leveraging rigorous, published resources that she developed. For instance, she has developed and published seven case study lessons through the National Center for Case Studies in Science Teaching that immerse students in real-world problems like genetic testing and DNA fingerprinting, ensuring instruction focuses on cultivating critical thinking and problem-solving. Her dedication to instructional validity is further proven by her development of the widely adopted Test of Scientific Literacy Skills (TOSLS), cited over 800 times, which provides a key tool for measuring quantifiable learning gains in scientific reasoning.

Beyond the formal curriculum, Dr. Brickman exhibits significant commitment to student success through meaningful interaction outside of the classroom. She ensures students experience science firsthand by encouraging their participation in community-facing projects. A recent initiative saw 1,290 of her students submit observations for a participatory science site she manages for "Caterpillars Count!", directly linking course content to environmental outreach. She has also directed an NSF Research Experience for Undergraduates (UBER) for nearly a decade, specifically recruiting 60 students over nine years. This dedication to advising and mentoring future educators has proven highly effective, with at least 14 UBER fellows pursuing PhDs in science or science education.

Crucially, Dr. Brickman's influence is not confined to her students or even her department. She makes significant contributions to the broader teaching and learning community through consistent dissemination of teaching innovations and high-level leadership. Notably, she has led UGA's teaching-evaluation reform efforts, steering 31 faculty teams from 18 units to develop peer evaluation protocols. This framework has achieved national recognition and is being adopted by other major universities, including UCLA and the University of Connecticut, extending her impact beyond the classroom. This institutional change work is supported by multiple NSF and HHMI grants totaling over \$3.5 million, underscoring her role as a national leader in the scholarship of teaching and learning.

In closing, Dr. Brickman embodies the spirit of the Felton Jenkins, Jr. Faculty Hall of Fame Award in every facet of her professional life. Her career is a testament to the transformative power of dedicated teaching, innovative pedagogy, and selfless service. I urge the committee to recognize her exceptional contributions with this distinguished honor.

Sincerely,

A handwritten signature in blue ink, appearing to read "B-C Ayers", with a stylized flourish at the end.

Benjamin C. Ayers

Senior Vice President for Academic Affairs and Provost

ACADEMIC POSITIONS

2013-present Josiah Meigs Distinguished Teaching Professor, Plant Biology, UGA
2007-present Adjunct Appointment, Department of Math, Science and Social Studies Education, UGA

EDUCATION

1993 Ph.D. Genetics, University of California, Berkeley, CA
1987 B.A. Biology, Columbia College, New York, NY

SELECTED INVITED TEACHING WORKSHOPS

Topic: Best Practices in Writing Selected Response Assessment Items

ASK-BIO What makes a good question? (seven, 3-hour national workshops) 2023-2024
University of Tokyo (2-day workshop series) 2023
HHMI BioInteractive (developed a book and presented eight, 4-hour workshops) 2021-2022

Topic: Scientific Teaching and Active Learning Workshops

Southeastern Education Veterinarian Consortium (1/2 day) 2024
Governor's Fellows Louise McBee Institute of Higher Education, UGA (1-week) 2023
National Summer Institutes (UT, Austin, Albertus Magnus College) (1-week/each) 2023

SELECTED HONORS, AWARDS, AND FELLOWSHIPS RELATED TO TEACHING

2024 Fellow - American Association for the Advancement of Science (Education)
2024 Student Career Success Influencer Award
2021 Lothar Tresp Outstanding Honors Professor Award
2014 Maryellen Weimer Scholarly Work on Teaching and Learning Award
2013 Josiah Meigs Distinguished Teaching Professorship
2007 USG Regents' Award for the Scholarship of Teaching and Learning
2006 Richard B. Russell Undergraduate Teaching Award

SELECTED PUBLICATIONS WITH RELEVANCE TO TEACHING

(^U undergraduate student, ^G graduate student, ^P postdoctoral researcher)

Dunbar^P, T. A., **Brickman, P.**, & Hill, J. R. (2025). Triangulating teaching growth: A three-voice approach to evaluating and documenting your teaching. *Documenting Teaching Excellence*.

Lahiri^G, S., Heil^G, A., Daniels^U, A., Gormally, C., and **Brickman, P.** (2025) Crafting a Biology Course for Non-Majors: Personas Help Delineate Faculty Decision Making. *CBE—Life Sciences Education*, 24(3), ar38. <https://doi.org/10.1187/cbe.24-06-0173>

CONDENSED CURRICULUM VITAE

- Brickman, P.** (2025). Counting caterpillars on campus: Engaging students in setting up a phenology site for participatory science. *Course Source*.
<https://qubeshub.org/community/groups/coursesource/publications?id=5411&v=1>
- Ericson^G, H. C., Lemons, P. P., Dolan, E. L., **Brickman, P.**, Krishnan, S., & Andrews, T. C. (2025). Are department heads ready for change? Leveraging a leadership action team to advance teaching evaluation practices. *CBE—Life Sciences Education*, 24(1), ar8.
<https://doi.org/10.1187/cbe.24-07-0175>
- Brickman, P.**, Dunbar^P, T. A., Tea, A., Lemons, P. P., Andrews, T. A., and Dolan, E. L. (2024). *DeLTA Teaching Evaluation Learning Community*, Libretexts.
- Heil^G, A., Olaniran^U, J., Gormally, C., & **Brickman, M.** (2024). It's in the syllabus: What syllabi tell us about introductory biology courses. *CBE—Life Sciences Education*, 23(3), ar37.
<https://www.lifescied.org/doi/full/10.1187/cbe.23-05-0081>
- Orr, R. B., Gormally, C., & **Brickman, P.** (2024). A road map for planning course transformation using learning objectives. *CBE—Life Sciences Education*, 23(2), es4.
<https://www.lifescied.org/doi/10.1187/cbe.23-06-0114>
- Samudra^G, S., Walters^U, C., Williams-Dobosz^U, D., Shah^U, A., & **Brickman, P.** (2024). Try before you buy: Are there benefits to a random trial period before students choose their collaborative teams? *CBE—Life Sciences Education*, 23(1), ar2.
<https://www.lifescied.org/doi/full/10.1187/cbe.23-01-0011>
- Heil^G, A. D., Gormally, C., and **P. Brickman.** (2023). Low-level learning: leaving behind nonscience majors. *Journal of College Science Teaching*, 52(7): 96-102.
DOI: [10.1080/0047231X.2023.12315884](https://doi.org/10.1080/0047231X.2023.12315884)
- Krishnan,^G S., Gehrtz,^G J., Lemons, P. P., Dolan, E. L., **Brickman, P.**, Andrews, T. C. (2022). Guides to advance teaching evaluation (GATES): A resource for STEM departments planning robust and equitable evaluation practices. *CBE-Life Sciences Education*, 21(3), ar42. <https://www.lifescied.org/doi/full/10.1187/cbe.21-08-0198>
- Andrews, T. C., **Brickman, P.**, Dolan, E. L., & Lemons, P. P. (2021 March/April). Every tool in the toolbox: Pursuing multilevel institutional change in the DeLTA Project. *Change*.
<https://doi.org/10.1080/00091383.2021.1883974>
- Brickman, P.**, Lannen, A^U., & Beyette, J. (2021). What to expect with group work: Problems, frequency, and success of mediation. *Journal of College Science Teaching*, 50(3). 61-67.
<https://doi.org/10.1080/0047231X.2021.12290509>
- Albano, A. D., **Brickman, P.**, Csikari, M., Julian, D., Orr, R. B., & Rodriguez, M. (2021). Integrating testing & learning. HHMI *BioInteractive*.

GRANTS

2022-2025 CoPI, Howard Hughes Medical Institute Inclusive Excellence 3, LCC4 on meaningful evaluation of teaching for promotion and tenure, \$523,065.

CONDENSED CURRICULUM VITAE

2018-2024 CoPI, National Science Foundation (NSF), Transforming STEM Education at R1 University through Multi-Level Action Teams, \$2,998,335.

2020-2023 CoPI National Science Foundation (NSF), Validated Learning Objectives for introductory biology: a resource for improving course design, faculty practice, and student outcomes, \$38,846

2020-2023 PI National Science Foundation (NSF), Research Experiences for Undergraduates Site: Undergraduate Biology Education Research Version 3 (UBERV3) \$291,600

CLASSROOM TEACHING

BIOL 1103 Concepts in Biology, 3 cr. Transformed into problem-based, active (100%) learning course. Spring 1999-present. Enrollment 450-600 per semester.

BIOL1103e Concepts in Biology (online) 3 cr. Asynchronous course. Summer 2013-present Enrollment 90-120 students per summer.

BIOL 2103H Concepts in Biology, 3 cr. Honors, service-based course, Fall 2013-present. Enrollment 20-72 per semester.

PBIO 8010 Biology Teaching Seminar, 1 cr. Helps prepare graduate students develop a syllabus and teaching activity for a course of their own. Fall 2013-2023. Enrollment 7-12 per semester.

BIOL 4960 – Undergraduate Biology Intensive Research Internship (2023)

SELECTED LEADERSHIP & SERVICE RELATED TO TEACHING

Department of Plant Biology/Biology Division

2024-2025 Chair, Academic Professional in Biology search committee

2017-current Chair, Teaching Evaluation Committee

2001-current Member, Biology Curriculum Committee

University of Georgia

2024-present Promotion & Tenure Review Committee

2020-2021 Josiah Meigs Professorship Award Committee

2020 Quality Enhancement Plan Selection Committee

Profession

2023-present Partnership for Undergraduate Life Sciences Education Fellow

2020 External Program Evaluator – Georgia Institute of Technology (Biology)

2013-2020 Editorial Board Member, *CBE – Life Sciences Education*

REFLECTIVE TEACHING STATEMENT

I believe that students learn best when they can use what they learn in their own lives. The large general education courses like those that I teach in biology are the first (and often only) class taken by undergraduates outside of their major and are designed to help students critically examine science in the living world. Thus, I strive to translate biology facts into useful knowledge and to help students practice skills of seeking and critiquing answers to biological questions they encounter daily. I want my students who are thinking, “I’m not a science person,” to start realizing they *want* to be one. This goal involves students participating in science that is interesting, relevant to them, helps their community, and lets them engage in science research.

My immediate teaching goal is simple: to get my students some basic biology knowhow. I don’t mean esoteric facts; I mean real skills they must have to make informed decisions in their own lives. Some of these skills involve basic biology concepts that pre-class surveys show my students don’t know. For example, treatment for diabetes, the fifth deadliest disease in the U.S., requires limiting carbohydrate consumption, but I have found fewer than 10% of my students know that tomatoes contain carbohydrate or can distinguish a simple from a complex carbohydrate in a list of ingredients. I see few students who can distinguish a virus from a bacterium, let alone understand why antibiotics won’t work to cure viral infections. Fewer than a third of my students can explain what it means if someone tests positive for a genetic variant linked to heart disease even though a third of Americans have a family history of the disease. And most students don’t know that plants take up carbon from the air rather than the soil, even though this fact is often the major reason for pushing reforestation to combat global warming. College students can learn a lot of facts from searching the Internet; my major teaching goal is to make sure students have mastered enough basic biology knowledge and concepts to be able to actually understand and use what they find in these searches.

My course curriculum is specifically designed around topics that immediately engage students in problems that demonstrate how biology content is relevant in their lives, and this curriculum has been published in the Codon Learning platform. Rather than relying solely on textbook readings to spark student interest, I use relatable videos (“How Big Oil Misled the Public into Believing Plastic Would Be Recycled”), news (“The Famine Ended 70 Years Ago, but Dutch Genes Still Bear Scars”), and test-your-knowledge surveys (“Think You’re Making Good Climate Choices?”) that demonstrate the relevance of biology to students’ lives. All course materials are built from a foundation of critical learning objectives that I developed using a

REFLECTIVE TEACHING STATEMENT

national survey of instructors. Objectives are tied to engaging activities, and I use multiple opportunities to provide feedback to support students' mastery through pre and in-class questions as well as a complete test prep pathway. Students engage deeply with content during class through group activities, such as developing visual models to explain relationships between concepts, comparing different problem-solving strategies, or analyzing evidence to make informed decisions. For example, in my unit on Genetic Testing, students learn the types of mutations that genetic tests scan for, as well as how DNA is gathered and analyzed to determine the presence of mutations. They evaluate the roles of genetics and environmental factors in human diseases, predict patterns of inheritance, and interpret the results of a genetic test. By the end of the unit, students complete a collaborative project in which they present a decision about whether the benefits of their genetic test outweigh the uncertainties and cost in both emotional and financial outcomes.

Too often, the only people "allowed" to be scientists are those with advanced degrees or who are currently practicing or publishing science. I want all my students to experience real science, so I provide opportunities for them to participate in projects like collaborating with environmental science students at a local high school to characterize the prevalence of antibiotic-resistant bacteria in soil; presenting for dorms and Greek life on composting and recycling; and setting up a site to measure changes in seasonal variation for arthropods like caterpillars, beetles, and spiders. These projects help my students experience data collection methods, understand the relevance of environmental challenges from a warming climate, and become more aware of the utility and need of science for public citizens.

Finally, I also want to increase the visibility of science as a career for students. To that end, I worked for 9 years on an NSF Research Experience for Undergraduates that provided summer residency research mentorship in biology teaching and learning. From 2014-2022, I recruited underserved students who were either the first person in their family to attend college, from schools with limited research opportunities, or from ethnic groups who have historically been under-represented in STEM. Over the 9 years of the program, 14 of our fellows have pursued Ph.Ds. in education or science research. One of the fellows from the second year of the program now serves as Brown University Assistant Director for STEM Education.

TEACHING ARTIFACTS AND INNOVATIONS

Innovative Teaching Practices

Opportunities to learn by participating in science: For almost 30 years, UGA has considered knowledge of basic principles concerning environmental issues to be so critical that it is required for graduation. And of the host of courses that fulfill this environmental awareness requirement, my courses provide students with authentic questions of social responsibility and civic life in which students help scientists collect data, speeding up scientific discoveries as students increase their own scientific literacy. Partnerships with the UGA Watershed Network and Office of Sustainability present students with situations in which their decisions impact others, where they can interact with people and situations that are unfamiliar, and where they explore alternatives and solutions to threats to the environment. Most importantly, students see the relevance of biology in their lives by becoming experts and presenting their knowledge to help the community. In my most recent project, 1290 of my students counted 4368 arthropods for a participatory science site at UGA for Caterpillars Count! that I created and now manage. Researchers use this data to observe trends in critical food for bird populations and to see how changes in climate and land use impact the plants and animals around us. My course materials have been adopted or used as models for developing additional honors service courses that fulfill environmental awareness and earned me the 2021 Lothar Tresp Outstanding Honors Professor Award.

Year	Project Impact & Example Assignments
2017-2019	150 Environmental Science students at Clarke Central High School characterized the prevalence of antibiotic-resistant bacteria in the soil.
2016-2019	Outreach videos on how to conduct outfall inspections of campus stormwater and composting & water quality for housing and Greek life.
2021-2022	Audited prevalence of mismanaged dumpsters and campus plastic waste.
2023	Created posters and flyers to encourage composting, waste reduction, and recycling for UGA housing.
2023-2025	Created, surveyed, and managed a participatory science site to analyze the timing of seasonal changes in insect emergence to boost environmental awareness for 1000 students/year.

TEACHING ARTIFACTS AND INNOVATIONS

Seeing Scientific Relevance with Cases and Projects: With the Internet and social media increasingly providing the major source of science facts for the public, information literacy skills now must comprise a critical component of my instruction. The case study lessons that I create provide scenarios that present real-world problems or situations that immerse students into role-play or decision making. I have developed and published seven cases on the National Center for Case Studies in Science Teaching site that tackle issues from sports injury and CTE, to DNA fingerprinting to solve crimes, debating genetic testing for athletes, matching siblings as organ donors, or analyzing a diet to find carbohydrates that cause flatulence as well as methane emissions (Figure 1).

Sweet Indigestion: A Directed Case Study on Carbohydrates

Peggy Brickman
Department of Plant Biology
University of Georgia



Part I—Of Cows and Carbs

"What's so funny?" Gwen asked as she slid next to her friends Sara and Emily at

"Read this," Sara said. "I'm thinking about getting my dad vaccinated."

S Y D N E Y, Australia, June 7 - Australian farmers are signing up their sheep and cattle in droves to take part in a vaccine program

today early results show they may be able to reduce methane emissions per animal by about 20 percent a year, or the equivalent of 300,000

1. Consider the girls' breakfast. Underline all foods containing carbohydrates.
2. What organism makes carbohydrates? Write a rule to help identify them.
3. Which ingredient causes gas? Why are some foods digestible and others aren't?

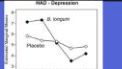
Figure 1—Published Case at the National Center for Case Studies in Science Teaching at the National Science Teachers Association

In addition, each 3-week unit in my course involves a final project in which students choose a problem of interest, seek sources of information, interpret quantitative data concerning the problem, draw conclusions, and communicate the results in a way that mimics how science is conducted. Assignments are presented either as blog posts about probiotics (Figure 2), videos about genetic testing, research on metabolism of antidepressants, or advocating for explicit labelling to identify endocrine disrupting chemicals in products.

Probiotics for Depression: Lactobacillus and Bifidobacterium

Scientific Evidence

A study conducted by **Praveen Senthil et al.** in 2013 tested the effect of Bifidobacterium on 64 adults with IRS and mild to moderate anxiety and/or depression. After 8 weeks, the study found that those who were administered Bifidobacterium reported decreased depression based on an HADS depression test. Another study conducted by Akashaki et al. (2016) revealed that individuals diagnosed with major depressive disorder and IBS researchers tested to see if taking a probiotic containing Lactobacillus and Bifidobacterium could result in a decrease in symptoms of depression. After 8 weeks, subjects who received the probiotic had significantly decreased Beck Depression Inventory (BDI) scores.



Week	B. longum	Placebo
0	18	18
2	16	19
4	14	20
6	12	21
8	10	22

Fig. 1. BDI scores over 8 weeks for B. longum and placebo groups. (Senthil et al., 2013)

Benefits and Issues:

- **Enhances neurotransmitters (GABA).** Creates mechanisms similar to drugs.
- **Stimulates the immune system** by producing antimicrobial compounds and promoting the growth of immune cells.
- **Also aids in digestion** by producing lactic acid, which inhibits harmful bacteria from growing.
- **Considered the best** last possible option to treat depression. However, do not seem to offer significant benefits when used as stand alone.
- **Benefits are seen within a few weeks.** Depending on the person, one can see effects in a few days or a few weeks.

Conclusion

We would suggest that Lactobacillus and Bifidobacteria are beneficial to use, but not as a stand-alone or replacement for an individual's antidepressants because they are not as effective as an antidepressant would be. An option could be to lower your dosage of antidepressants and eat more products, including yogurt, cottage cheese, buttermilk, and other foods containing Lactobacillus and Bifidobacteria.

Sources

Senthil, Praveen. "Effect of Bifidobacterium on 64 Adults with Irritable Bowel Syndrome and Mild to Moderate Anxiety and/or Depression." *Journal of Clinical Research in Hepatology and Gastroenterology*, 2013. Web. 20 Apr. 2016. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3822221/>

Akashaki, S. et al. "The Effect of Probiotic on Depression in Patients with Irritable Bowel Syndrome: A Randomized Controlled Trial." *Journal of Clinical Research in Hepatology and Gastroenterology*, 2016. Web. 20 Apr. 2016. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4822221/>

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Figure 2 –Student Flyer Examining Probiotics (2024)

EVIDENCE OF TEACHING EFFECTIVENESS

Delivering a Complete Learning Package: In practice, it is nearly impossible to design truly aligned courses in which class activities are matched with opportunities for students to prepare pre-class, practice solving problems in-class and post-class, as well as studying for tests. I partnered with a company called Codon Learning to develop an online platform that helps instructors build such complete courses from the ground up based on high-quality lesson-level learning objectives that I developed as part of an NSF-funded grant. The course that I created includes over 2000 questions that help students develop stronger self-regulated learning skills by applying self-testing, spaced learning, and metacognition (Figure 3). Consistent use of Codon's self-testing courseware has been shown to eliminate performance gaps for less-prepared students and helped all students do better in the course. My students indicate that the platform encourages them to return to challenging concepts, improve study habits and build confidence (Figure 4).

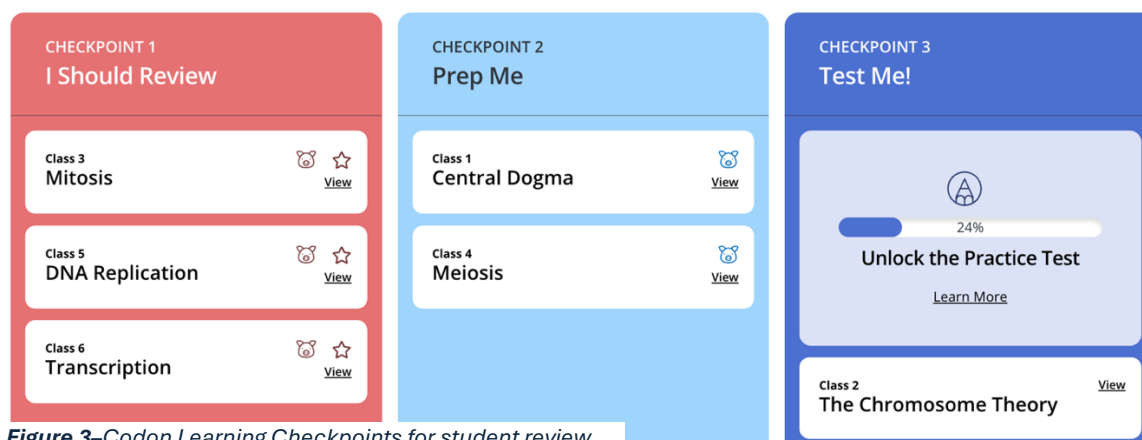


Figure 3—Codon Learning Checkpoints for student review

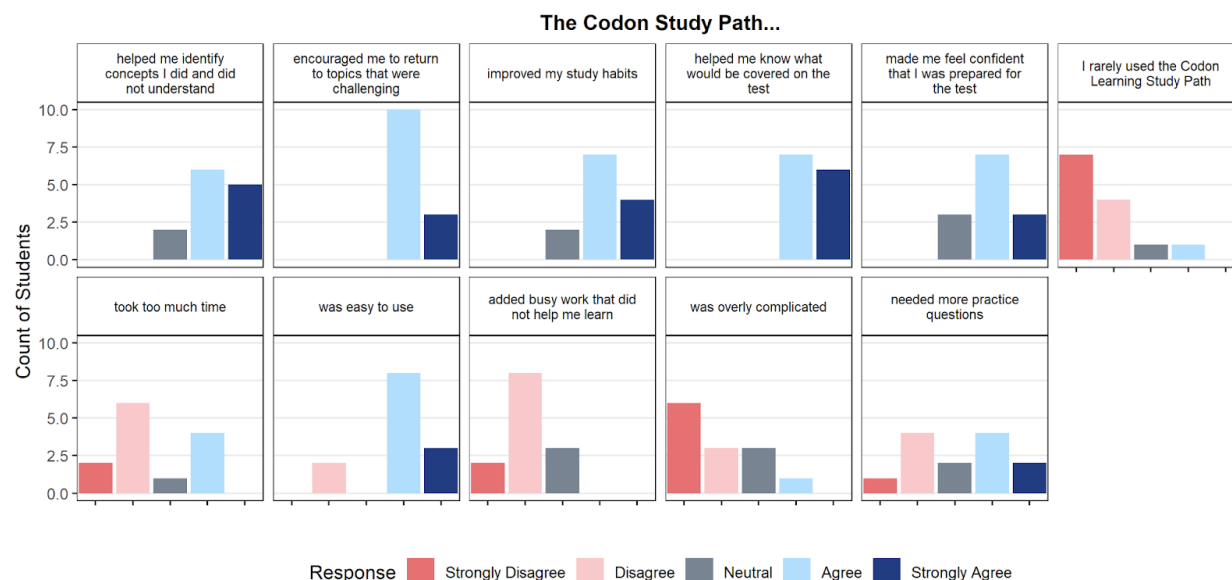
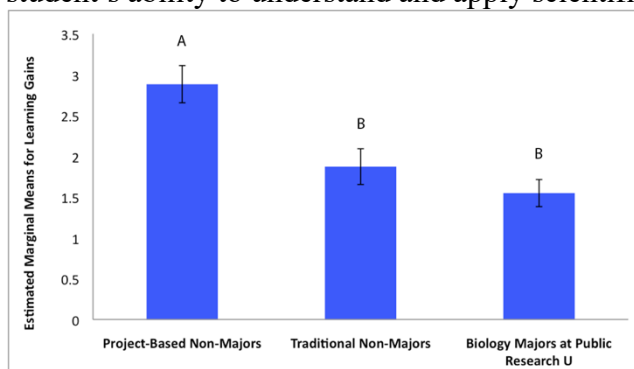


Figure 4—Survey responses indicate student support for the Codon Platform

Brickman Fall '22 Students

EVIDENCE OF TEACHING EFFECTIVENESS

Measuring Student’s Development of Scientific Literacy Skills: Developing interesting and engaging case studies and projects is the first step; I can also provide evidence that my students are mastering real-life skills with improved learning in my courses compared to more traditional non-majors courses or even courses for biology majors. To determine this, I developed a Test of Scientific Literacy Skills (TOSLS), a formal and informal assessment designed to measure a student’s ability to understand and apply scientific knowledge, concepts, and processes. The



paper describing the tool (Gormally et al., 2014) has been cited over 800 times and adopted in dozens of campuses nationally (including UGA’s Biology Division) and internationally (Chile, Turkey, France) to assess student learning gains. (Figure 5).

Figure 5– Estimated marginal mean learning gains for each course, controlling for pre-test scores. Letters indicate significantly different learning gains among courses ($p < 0.05$).

Students report that my courses and activities help them learn. I teach courses that students *must* take rather than those they *choose* to take for graduation. So, I focus on the value to their lives rather than their degrees. Fortunately, students recognize these activities as useful and challenging on course evaluations.

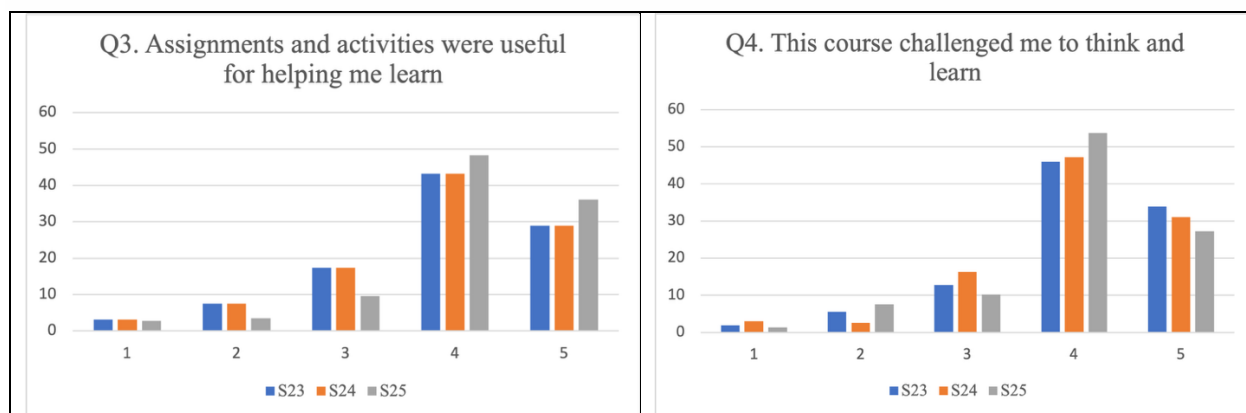


Figure 6 – End of Course Evals: 1 (Strongly Disagree); 2 (Disagree); 3 (Neutral); 4 (Agree); 5 (Strongly Agree)

Selected student testimonial: “Dr Brickman is a wonderful professor. She really does care about the success of her students, and that is evident. I can particularly notice her fervor and passion when it comes to teaching as I am very intentional about my learning. I often ask her deep, very specific questions and she always responds positively and with a high degree of specificity. I think the class is very well structured as it allows for a lot of engagement in the learning process. In particular, the projects are always application oriented, such as disease relevance, genetic disorders and how they can be mitigated, and exploring biodiversity in the wild. I personally enjoy comparing the theory of the class to the applications in the assignments.”

EVIDENCE OF TEACHING EFFECTIVENESS

Ensuring more students see teaching biology as a future career: As part of an NSF-sponsored research experience for undergraduates (UBER), I helped recruit and train 60 undergraduate students over nine years who plan to teach K-12 science before potentially pursuing a doctorate in science education or related areas. Over the 9-week program, fellows lived on campus and engaged in independent research projects along with weekly paper discussions and workshops on research methods, career panel discussions, and presentations (Figure 7). I ran all aspect of the



Figure 7– UBER fellows present scientific posters with their mentor - 2022

program for three years and personally mentored eight students in my research team publishing 6 manuscripts with student co-authors. 20% (13) of our former fellows pursued or are currently pursuing their Ph.D. or M.A. in science or science

education. Ten of our former fellows became middle or high school science teachers. My first mentee is currently an assistant professor at UGA in the College of Education. Their efforts will help ensure a broader group of students persist in biology, and the knowledge they gained as UBER fellows will improve recruitment and retention of undergraduate biology students.

Sample Quotes from participating fellows:

- “I LOVED WORKING WITH EVERYONE IN THIS REU PROGRAM. THE EXPERIENCE WAS DEFINITELY A ONCE IN A LIFETIME EXPERIENCE.” Fellow Summer 2020
- “Before this experience I thought I'd be a high school science teacher for the rest of my life and now I am highly interested in educational research and becoming a professor in the college of Ed.” Fellow Summer 2020
- “Before doing research I had no idea what graduate school was like, what it was for, or what I could do with a degree. Now I'm seriously considering a PhD and am much more likely going to apply to a STEM education program.” Fellow Summer 2021
- “I thought more about what I see myself doing in the future. Although I'm not 100% sure, my interest in education has been made more apparent and now I have intentions on looking into graduate programs for science education.” Fellow Summer 2022

LETTERS OF SUPPORT

Dana Theoc

(706) 461-4703 | theocdana@gmail.com

Kingston 6, Jamaica, W.I. | Atlanta, GA

University System Board of Regents,

It is my honor to nominate Dr. Marguerite Brickman for the University System of Georgia CTL Award. I am a Business Analyst at McKinsey & Company in Atlanta. I graduated from the University of Georgia in May 2025 as a Foundation Fellow and First Honor Graduate after completing a B.S. in Psychology. I was a student in Dr. Brickman's Fall 2021 Biology 2103H: Basic Concepts in Biology (Honors) course, and I am eternally grateful that I had the chance to learn from such an inspiring and thoughtful figure. Dr. Brickman cares deeply about the success of her students, not only in the classroom, but also in their professional and personal lives. Throughout the course, Dr. Brickman demonstrated that her goal was not only for her to ensure we obtain a passing grade but to inspire us to be confident, healthy, and community-oriented scholars and citizens. I can confidently say that she was successful.

Dr. Brickman's teaching methods are to be admired among University System of Georgia faculty. She takes a student-centered approach to teaching that greatly develops important skills within her students. Student collaboration, discussions, and presentations were an integral aspect of our learning. Dr. Brickman encouraged us to work in groups as science (and most professions) are highly dependent on working well with others. At the beginning of the semester, we were each assigned to a group that would remain as our key support and driving force throughout the course. Each group completed assignments together in and outside of the classroom. Often, we had the chance to present our findings to the class and practice imparting our knowledge to our fellow students. As an international student, I sometimes struggled to speak up in classes out of fear that my perspectives may be out of place and my voice may not be welcomed. Dr. Brickman empathetically moderated classroom discussions and worked to create a space that values creativity in thought. This group-based activity model developed a greater appreciation within me for the work my professors do and made me more comfortable leading discussions about scientific research, results, and a range of topics. Now, in my professional career, I work in a team every day. The critical collaborative and problem-solving skills I developed under Dr. Brickman's guidance sets me apart from other recent graduates in my field. Also, the communication skills I gained through our class presentations allow me to clearly and effectively demonstrate results to my clients.

Despite being an expert in her field, Dr. Brickman delicately and compassionately explained complex technical and theoretical concepts with her undergraduate audience in mind. As we covered a unit on nutrition, we engaged with the topic of genetically modified organisms. Dr. Brickman carefully explained the science behind these complex and controversial phenomena at

LETTERS OF SUPPORT

a level that I could understand even with my limited experiences in the hard sciences or food science. Most importantly, Dr. Brickman highlighted the relevance these topics had in our lives and how we could make a tangible impact to create healthier families and communities. For example, Dr. Brickman showed us how to read nutrition labels on foods and identify if foods had been genetically modified or if they contained excessive amounts of unhealthy trans fats or processed sugars. This simple skill is something I will carry with me for the rest of my life as I aim to make balanced food choices for me and my family. Rarely have I seen a professor so carefully connect scientific concepts to daily life choices that are crucial to our well-being.

I also greatly admire Dr. Brickman for her embodiment of UGA's mission "to teach, to serve, and to inquire into the nature of things." Dr. Brickman didn't teach or encourage her students to ask questions simply for the sake of learning; she understood that service is the action that connects and creates value in all we do at academic institutions. Dr. Brickman pushed us to apply the knowledge we learned in ways that served Georgia and our local Athens community. We engaged in several service projects throughout the course such as conducting a waste audit to improve cleanliness and recycling across campus and participating in a river cleanup. At the river cleanup, I was truly moved by the beauty of Georgia's natural environment and Dr. Brickman's emphasis on the need for scientists, businesspeople, students, and people from all backgrounds to protect it. I spent my next three years interning for UGA's Office of Sustainability, continuing to lead river cleanups, waste audits, and other efforts to improve our community, and my senior year I was awarded UGA's Presidential Award of Excellence for my service to the institution. I will forever thank Dr. Brickman for inspiring me to begin a lifetime of service.

I am so grateful for Dr. Brickman, and that I was able to develop a meaningful relationship with a professor who genuinely cares about her students and her community. She has truly changed my life. I put my full support behind her for the University System of Georgia CTL Award. If you wish to hear more about my experience learning from Dr. Brickman or need further information from me, please contact me at theoCDana@gmail.com.

Best,



Dana Theoc

LETTERS OF SUPPORT

Dear Colleagues,

September 22, 2025

It is with great enthusiasm that we nominate **Dr. Marguerite (Peggy) Brickman** for the University System of Georgia's Felton Jenkins, Jr. Hall of Fame Faculty Award. As a Josiah Meigs Distinguished Teaching Professor in the Department of Plant Biology at UGA, Dr. Brickman is widely recognized as one of UGA's most accomplished and innovative educators. She has spent nearly three decades advancing the scientific literacy and engagement of undergraduates. Her work has transformed how biology is taught at UGA, impacting tens of thousands of students at UGA alone and preparing them to make informed decisions about health, the environment, and society. Building on this local impact, her influence extends nationally and internationally through faculty development initiatives and widely adopted curricular innovations. She is an exemplary representative of our teaching mission and an ideal candidate for this system-wide recognition.

Transforming Biology Education: Dr. Brickman's commitment to excellence in teaching is exemplified by her efforts in BIOL 1103 (*Concepts in Biology*), which serves as a foundational course for non-science majors. This is a particularly challenging course to teach effectively given the audience: students typically arrive with limited background knowledge, many are intimidated by scientific material, and they often question the relevance of science to their daily lives. These challenges are magnified by the large-lecture format, where keeping 150–200 students per section actively engaged is no small feat—and yet Dr. Brickman has designed a course that both imparts essential biological knowledge and systematically develops critical thinking skills. Each semester, across multiple sections enrolling a total of 450–600 students, she engages learners in collaborative, problem-based activities that connect biology to health, sustainability, and other real-world issues.

Notably, this commitment to active, relevant learning extends well beyond face-to-face instruction. One clear example is Dr. Brickman's work in the development of BIOL 1103e, an asynchronous, online version of the course that serves an additional 90–120 students each summer. Teaching science effectively in an asynchronous format presents its own challenges, but she has designed an online experience that keeps students engaged and supports mastery of key concepts. Her curriculum is built around validated national learning objectives and includes a complete test-prep pathway to foster self-regulated learning. Beyond UGA, Dr. Brickman has disseminated her nationally recognized curriculum by publishing it on the Codon Learning platform, making it accessible to instructors across the USA and around the world. This resource includes a full set of validated learning objectives, more than 2,000 assessment items, and aligned activities that allow others to replicate her evidence-based, high-structure approach. The impact of her work thus extends far beyond her own classroom.

Demonstrated Impact on Student Learning: Building on this foundation, Dr. Brickman has engaged in a rigorous program of research and innovation aimed at measuring and improving student learning. She co-developed the widely adopted Test of Scientific Literacy Skills (TOSLS), which has been cited more than 800 times and is used internationally to assess gains in scientific reasoning. Her work has demonstrated that students in her redesigned courses not only gain essential biological knowledge, but they also develop stronger problem-solving skills along with confidence in applying science to real-world issues. This scholarship has informed her own teaching and provided tools that faculty elsewhere at UGA and at other institutions use to

LETTERS OF SUPPORT

evaluate and enhance their own courses. Together, these efforts have positioned Dr. Brickman as a national leader in the scholarship of teaching and learning.

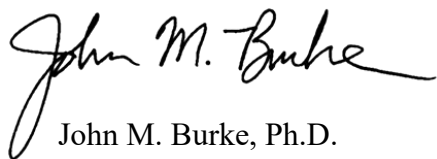
Mentoring and Developing Future Educators: In addition to disseminating these tools widely, Dr. Brickman has invested deeply in mentoring the next generation of educators. This has included training more than 60 graduate students through her “*Biology Teaching*” course (PBIO 8010), preparing them to design courses of their own, develop syllabi, and implement evidence-based instructional practices. She has also mentored over 45 postdoctoral fellows and five novice instructors, many of whom have gone on to successful academic careers. Beyond the above, she typically delivers more than 30 hours of professional development annually for faculty peers, having led workshops across the USA and internationally through NSF, HHMI, and National Academies programs. Her commitment to mentoring ensures that her influence will continue shaping biology education for years to come.

Leading Institutional and National Change: Finally, Dr. Brickman’s impact on the teaching and learning community is both profound and enduring. She has been the driving force behind UGA’s teaching-evaluation reform effort, leading 31 faculty teams from 18 units, representing more than 900 total faculty, through a process of developing equitable, meaningful protocols and rubrics for peer evaluation of teaching. The resulting frameworks have been adopted by 12 STEM departments at UGA and are now being used at other major universities, including UCLA, University of Connecticut, and Texas Tech. This work, supported by multiple NSF and HHMI grants totaling over \$3.5M, is a model for systemic change that advances teaching quality at the institutional level. Through this work, Dr. Brickman has helped shift the culture of teaching at UGA, contributing to a model that other institutions seek to emulate.

Recognition of Excellence: In recognition of her many contributions, Dr. Brickman has been honored with multiple major teaching awards at UGA, including the *Richard B. Russell Award for Excellence in Undergraduate Teaching*, the *Josiah Meigs Distinguished Teaching Professorship* (UGA’s highest teaching honor). Most recently, she was elected as a Fellow of the American Association for the Advancement of Science for her contributions to biology education. Together, these honors underscore her transformative impact on teaching and affirm her standing as one of the university’s most influential educators.

In sum, Dr. Brickman exemplifies the many qualities that the Felton Jenkins, Jr. Hall of Fame Faculty Award is intended to recognize. Her innovative and transformative teaching, tireless mentoring, and campus and national leadership have improved the educational experience for tens of thousands of students and strengthened the culture of teaching at UGA and beyond. We can think of no one more deserving of this honor, and we offer our strongest and most enthusiastic endorsement.

Sincerely,



John M. Burke, Ph.D.

Distinguished Research Professor & Head
Department of Plant Biology



Kristen R. Miller, Ph.D.

Senior Academic Professional & Director
Division of Biological Sciences