Georgia Tech | Center for Teaching and Learning

2019 - 2020 Annual Report

Georgia Tech | Center for Teaching and Learning

Message from the Director

Dear Colleagues:

I am delighted to share the 2019-2020 FY report of the Center for Teaching and Learning (CTL) with you. We have once again served a record number of faculty, future faculty, postdoctoral scholars, and TAs through our programming. In brief, we have provided service to approximately 9,570 participants through orientations, workshops, courses, consultations, recognitions, and online resources. Details of these connections are highlighted on the following pages.

CTL's 65% increase in service to individuals this year follows our previous year's growth of 32% in 2018-2019. As a unit in the Office of Graduate Education and Faculty Development, our continued growth demonstrates our contributions to Institute initiatives through the services we provide and the partnerships we form.

This year has been a particularly tumultuous one, with the COVID-19 pandemic requiring the campus to transition from the face-to-face and blended teaching it traditionally offers to emergency remote teaching in mid-March to fully remote teaching during the summer. A special section at the end of the report on "CTL's Response to COVID-19" highlights how CTL carried out its mission to engage both on-campus and online instructional communities in evidence-based teaching practices. We appreciate the extraordinary efforts of the faculty and TAs who partnered with us during this challenging period in order to provide their students with meaningful learning experiences.

Sincerely,

Joyce Weinsheimer

Joyce Weinsheimer
Director of the Center for Teaching and Learning

Georgia Tech | Center for Teaching and Learning

Mission & Vision Statements

The CTL Mission
The Center for Teaching and Learning promotes and supports an on-campus and online instructional community where excellence in teaching and learning is valued and where educators engage in evidence-based, state-of-the-art practices that foster opportunities in which diverse students and instructors can thrive.

The CTL Vision
The Center for Teaching and Learning envisions a campus culture that creates meaningful learning for all students, empowers people to engage in effective instruction, and values excellence in teaching.

Georgia Tech | Center for Teaching and Learning

Faculty and Staff
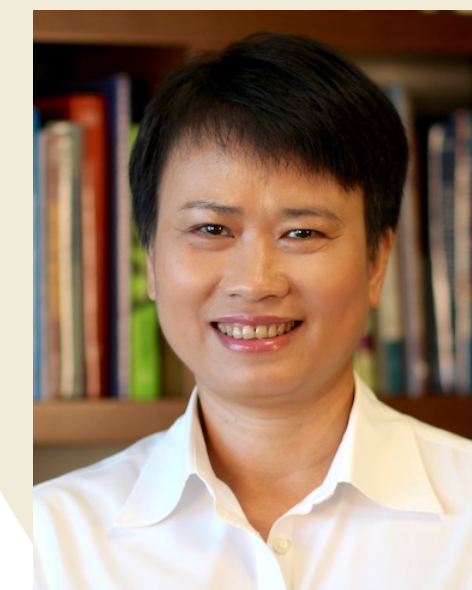
Joyce Weinsheimer, Ed.D.
Director

David Lawrence, Ph.D.
Associate Director

Carol Subiño Sullivan, Ph.D.
Assistant Director of
Faculty Teaching and
Learning Initiatives

Rebecca Pope-Ruark, Ph.D.
Faculty Teaching and
Learning Specialist

Chaohua Ou, Ed.D.
Assistant Director of
Learning and Technology
Initiatives

Vincent Spezzo, Ed.D.
Program Manager of
Teaching and Learning
Online

Kate Williams, Ph.D.
Assistant Director of TA
Development and Future
Faculty Initiatives

Tammy McCoy, Ph.D.
TA Development and Future
Faculty Specialist

Sarah Kegley, M.A.
International TA Program
Manager

Evan Mallen, Ph.D.
Postdoctoral Scholar

Felicia Turner
Academic Program
Coordinator II

Anastasia Volokhova
Administrative Professional II

Terri Dunbar
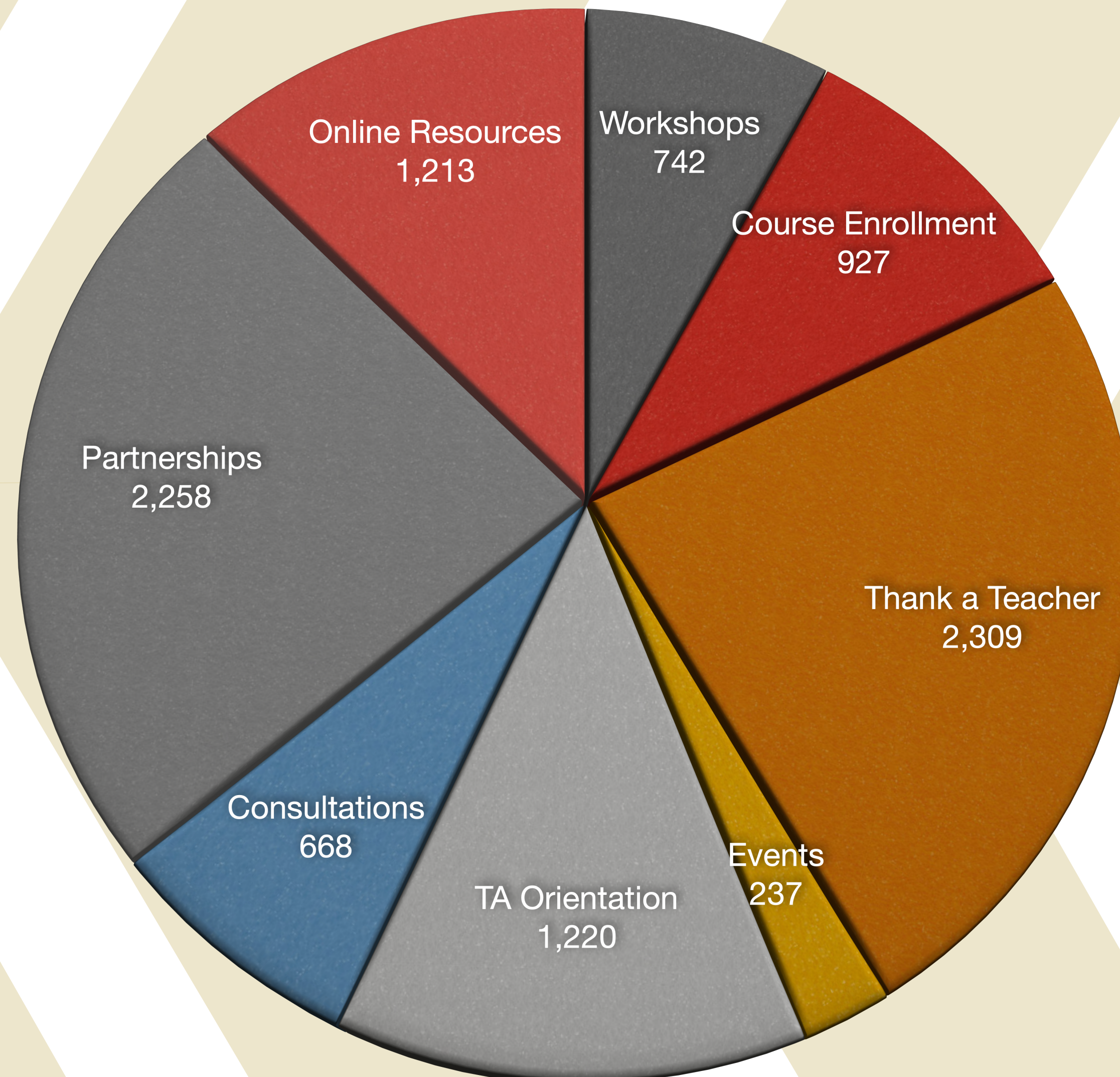Graduate Teaching Fellow

Angela Yoo
Graduate Teaching Fellow

Jana Pomerantz
Student Graphic Designer

Camryn Burke
Student Writer

CTL faculty provided **688** consultations, classroom observations, and class dialogues in FY 2019 - 2020.

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By the Numbers

CTL Programming and Services

Pie chart: CTL Programming and Services
- Online Resources 1,213
- Workshops 742
- Course Enrollment 927
- Thank a Teacher 2,309
- Events 237
- TA Orientation 1,220
- Consultations 668
- Partnerships 2,258

In FY2019 - 2020, the Center for Teaching and Learning had over 9,574 contact points with members of the Georgia Tech community, a 65% increase over the previous fiscal year.

- Workshops
  - Attendees
- Courses
  - Students enrolled in CTL course offerings
- Thank a Teacher
  - Notes submitted by students to instructors
- Events
  - Celebrating Teaching Day, Fall Teaching Kickoff, and GTREET
- TA Orientation
  - Graduate and undergraduate students completing TA training
- Consultations
  - One-on-one consults, class observations, and class dialogues
- Partnerships
  - Services conducted in collaboration with other stakeholders
- Online Resources
  - CTL resources downloaded / imported into Canvas courses

NOTE: The data presented in the pie chart represents contact points, not unique individuals. For example, if a faculty member attends a CTL workshop and receives a Thank a Teacher note, then two contact points would be counted.

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Thank a Teacher Program

The *Thank a Teacher* program recognizes outstanding contributors to the learning environment at Georgia Tech. Any student can submit a *Thank a Teacher* note to a faculty member, TA, or staff member on campus. Recipients are recognized with a certificate at Celebrating Teaching Day.

2,309 *Thank a Teacher* notes submitted by students during FY2019-2020, a 42% increase over the previous year
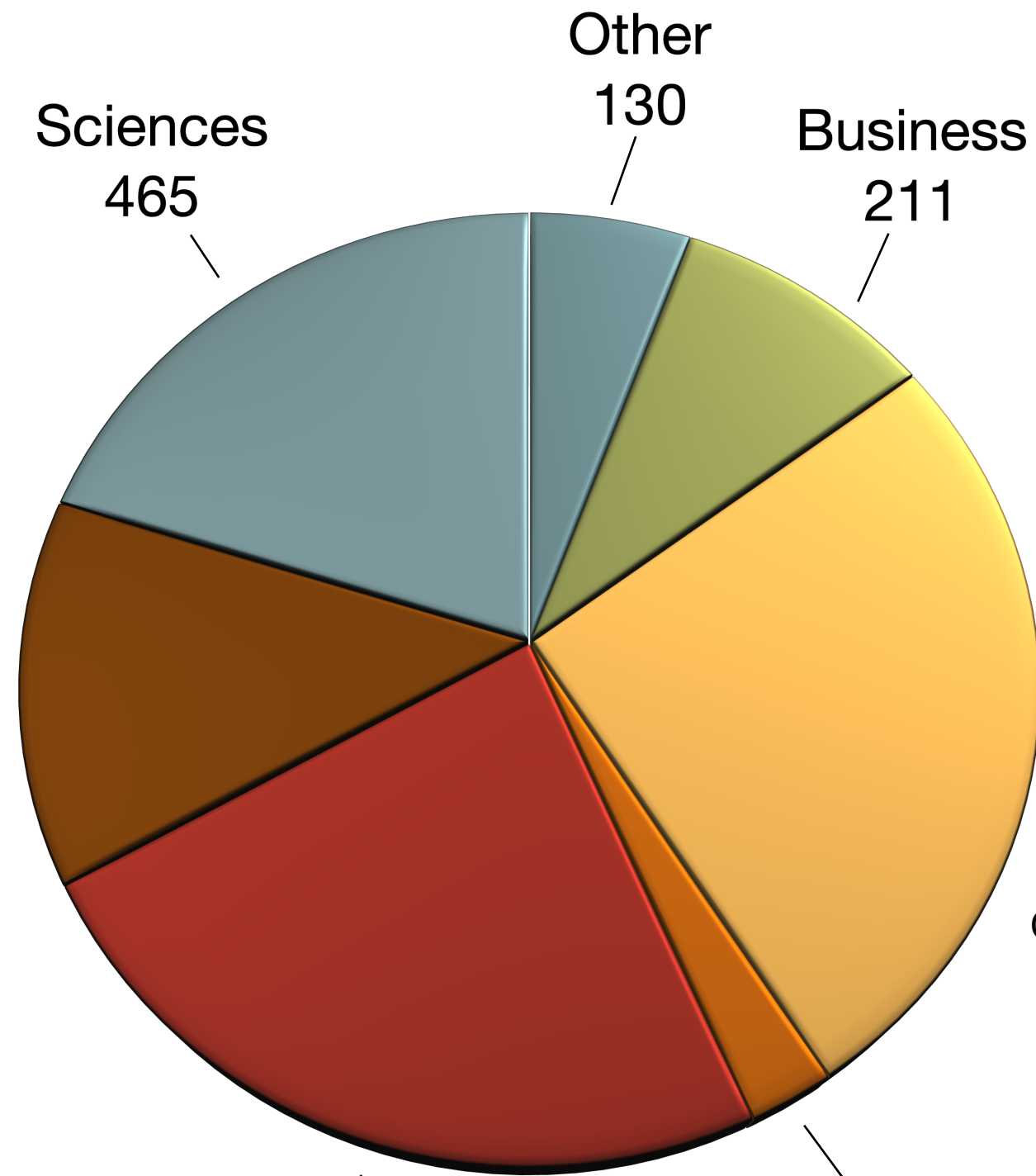
Sciences
465
Biological Sciences - 55
Chemistry & Biochemistry - 88
Earth & Atmospheric Sciences - 21
Mathematics - 217
Physics - 40
Psychology - 44

Other
130

Business
211

Liberal Arts
301
Economics - 35
History & Sociology - 29
Literature, Media, & Communication - 96
Modern Languages - 75
Public Policy - 33
International Affairs - 33

Computing
605
Computer Science - 340
Interactive Computing - 165
Computational Science & Engineering - 100

Engineering
540
Aerospace - 36
Biomedical - 26
Chemical & Biomolecular - 30
Civil & Environmental - 53
Electrical & Computer - 124
Industrial & Systems - 147
Materials Science - 18
Mechanical - 106

Design
57
Architecture - 15
Building Construction - 15
City & Regional Planning - 10
Industrial Design - 13
Music - 4

"You are truly one of the most passionate and genuinely caring professors I've ever had. Your energy in the classroom motivates me and the students around me to reach complete understanding of the course material and to think like an engineer. You're willing to work one-on-one with students when they need it, and you convey difficult concepts with clarity. One of your strongest traits as an instructor is your ability to adapt the plan of the day to facilitate whatever the class demonstrates they are struggling with. I just wanted to thank you for your sincere commitment to helping teach the next generation of biomedical engineers."

- Student in Biomedical Engineering 2210

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Events »»»»»»»»»»»»»»»»»»» Fall Teaching Kickoff

Each August, the Center for Teaching and Learning hosts a day-long Fall Teaching Kickoff event, which is a series of interactive workshops to help get participants geared up and ready for the first day of class.

Syllabus Clinic for New Instructors

The Syllabus Clinic introduced new instructors to the backwards design process, building on research that shows that the way your syllabus is constructed can affect your students' ability to learn in your class. In this workshop, participants explored different aspects of a syllabus, including learning objectives and assessment strategies. In addition, participants explored Georgia Tech policies related to teaching and learning and made decisions about specific course policies for their own course.

Creating Conditions for Well-Being in Georgia Tech's Learning Environments

Students arrive at Georgia Tech expecting to flourish; most are learners who typically have exceeded everyone's expectations. Not long into the term, however, these same students experience high levels of stress; they question their ability to "deliver" and wonder about their "fit" at Georgia Tech.

In response to issues of student well-being, Georgia Tech, like many of our peer institutions, is creating new units dedicated to our students' health. While these units provide essential expertise in social, physical, and psychological support for students, their focus seldom addresses the impact of pedagogy or learning environments on students. Research indicates, however, that faculty and the choices we make about classroom culture, course design, assignments, and assessment have the potential to make a significant contribution to student well-being.

This workshop addressed the following questions: Within the context of teaching and learning, what fosters well-being in learners? What conditions are present in a learning environment that promote student well-being? Participants explored course policies and teaching strategies that support student learning and well-being and shared their own experiences as well. Working together, they contributed to a toolkit that was shared with Georgia Tech instructional staff across the disciplines.

Smarter Feedback: Providing Enhanced Feedback through Digital Technology

When it comes to providing feedback through digital means, Georgia Tech has no shortage of tools that instructors can leverage to deliver feedback to their students. The challenge becomes selecting the tools that will work best for your class and determining how to utilize its features to their fullest so that you can focus on creating quality feedback that is enhanced by technology rather than hampered by it. In this workshop, participants discussed the various types of feedback they can provide and explored a variety of digital tools they can use to optimize their time while providing students with engaging feedback.

Graduating Global Citizens: A Roundtable Discussion

Achieving Georgia Tech's strategic goal of graduating good global citizens is far from an easy proposition. During this roundtable discussion, participants considered the following questions: As our current government steps away from international agreements and denies the results of the scientific community, how can faculty encourage their students to create solutions to global grand challenges? In the face of political pressure to prioritize national interests above all, how can faculty empower their students to maintain a sense of global responsibility? And, when a portion of public rhetoric explosively asserts white supremacy, how can faculty use their classrooms to help students seek diversity and develop the skills necessary to deftly navigate cultural contexts?

We at Georgia Tech can be proud of our exceptionally high rate of study abroad participation and our signature programs across colleges. Because 60% of our undergraduates come from Georgia, however, it's possible for our Atlanta-based students to never experience global perspectives. What more might faculty intentionally do to prepare their students to live and work in a globalized and culturally diverse world?

Participants joined the Center for Teaching and Learning and the Office of International Education for a roundtable discussion of how we can foster the development of good global citizens in our on-campus courses. The ideas generated at the roundtable helped us envision our next steps!

99 participated in Fall Teaching Kickoff.

94% of attendees gave the workshops an overall rating of very good or excellent.

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Events

Georgia Tech Retreat Exploring Effective Teaching (GTREET)

The Center for Teaching and Learning's biennial event, the Georgia Tech Retreat Exploring Effective Teaching (GTREET), is an opportunity for faculty across the Institute to gather and actively explore innovative ways to improving learning for Georgia Tech students.

Our time together in January 2020 was guided by the overarching question "How might we move beyond (unhelpful) traditional educational structures to build a culture of challenge, meaningful experience, and flourishing for our Georgia Tech students?" To explore this question, attendees participated in a think-tank-style workshop focusing on ideas for tapping into student motivations and "superpowers" and testing the potential for non-traditional grading strategies in our teaching practices and innovations.

This year's speaker was cultural, linguistic, psychological, and educational anthropologist, **Dr. Susan D. Blum, professor of anthropology at the University of Notre Dame**, and author of *I Love Learning, I Hate School: An Anthropology of College* as well as a forthcoming collection on "ungrading." Her recent work attempts to understand the educational experience of her students and how traditional teaching practices and academic structures, even at an elite institution, are often at odds with students' motivations and goals.

In her talk, *Building on Students' Superpowers: Ungrading, Motivation, Curiosity, and Real Learning*, Dr. Blum shared her findings and personal experiences, as well as introduced the concept of "ungrading" as one way to build a culture of challenge, meaningful experience, and flourishing for our students (read Dr. Blum's *Inside Higher Ed* article on ungrading here). She drew on the anthropology of learning as well as Scholarship of Teaching and Learning to suggest that innovative pedagogical approaches such as ungrading can yield better learning, more honest relationships with students, and more authentic preparation for life beyond school.

32 members of the Georgia Tech community participated in GTREET.

100% of attendees gave the event an overall rating of very good or excellent and an average rating of **5.0 / 5.0** with 5 being excellent.

Dr. Susan Blum

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Events

Celebrating Teaching Day

Celebrating Teaching Day is an annual event hosted by the Center for Teaching and Learning that honors and celebrates the dedication of Georgia Tech faculty and instructors who create engaging, challenging, and supportive learning experiences for their students throughout the year. This year's event was attended by 150 members of the Georgia Tech community. It was one of the last in-person events we were able to hold before public gatherings were restricted due to the pandemic.

Celebrating Teaching Day offered a poster session featuring 55 educational initiatives carried out by CTL's faculty teaching fellows, faculty learning communities, Brittain Fellows, and other members of the broader Georgia Tech community.

Following the poster session, participants celebrated teaching with a luncheon and a raffle. Representatives from Georgia Tech leadership, teaching fellows, faculty learning communities, recipients of Thank-a-Teacher notes, and CIOS award winners shared their teaching experiences and drew raffle tickets/prizes for audience members to enjoy. Groups honored during the luncheon raffle included the Class of 1969 Teaching Fellows, the Hesburgh Award Teaching Fellows, the Provost Teaching and Learning Fellows, the Chancellor's Learning Scholars, the Teaching and Technology Partnership Fellows, and the recipients of Thank-a Teacher notes and the Student Recognition of Excellence in Teaching: Class of 1934 Teaching Award.

150 members of the Georgia Tech community participated in Celebrating Teaching Day.

95% of attendees gave the event an overall rating of very good or excellent and an average rating of 4.7 / 5.0 with 5 being excellent.

Faculty Teaching & Learning Initiatives

Georgia Tech | Center for Teaching and Learning

Partner Events and Initiatives

New Faculty Orientations

New Faculty Orientation

In August, CTL facilitated "Teaching at Tech" for new faculty. Joyce Weinsheimer and David Lawrence shared "Expectations: Spoken and Unspoken," a video CTL recently produced that illustrates what not to do on the first day of class, and then facilitated a speed networking exercise for participants to share ideas for how to set a positive learning environment. Carol Subiño Sullivan then shared the *Teaching at Georgia Tech* Guidebook and used an open-book quiz to facilitate a discussion about policies and procedures that pertain to teaching at Georgia Tech.

In partnership with the Office of Faculty Affairs, CTL contributed to an extended new faculty orientation series designed to support faculty throughout their first year. In October, CTL facilitated a workshop for new faculty on "Engaging Students in the Classroom with Active Learning." Faculty explored strategies that would help their students process new information, practice applying it, and then use feedback to understand the quality of their learning.

New Faculty Welcome and Orientation to Teaching at Georgia Tech

In August and January, CTL co-hosted this event for new instructors with the Office of Faculty Affairs. Participants include new part-time, temporary, and visiting faculty as well as new graduate student instructors of record. At the event, participants learned about Georgia Tech traditions, had a question-and-answer session with a panel of experienced instructors, learned about policies and procedures that pertain to teaching, and reviewed Thank-a-Teacher notes written by Tech students that express what they value about good teaching.

Serve-Learn-Sustain

Serve-Learn-Sustain (SLS) is a campus-wide academic initiative launched in January 2016 to prepare students to use their disciplinary expertise to address the world's most pressing sustainability challenges in ways that improve community well-being.

On June 5 and 10, 2020, the Centers for Teaching and Learning (CTL) and Serve-Learn-Sustain (SLS) hosted two virtual conversations with Georgia Tech instructors on "Stepping Up: How Might Current Events Impact Our Teaching?" These conversations provided instructors with the opportunity to think through how and why to engage with students in the current moment, specifically following the killing of George Floyd, Breonna Taylor, and Ahamaud Arbery at the hands of the police. Participants considered the questions: Should we treat the world around us as a distraction, or should we somehow integrate it into our teaching? What do we want our students to learn from our time together this summer? More than 80 members of the Georgia Tech community participated in the virtual conversations. Each conversation featured a panel of speakers:

- **Tiffiny Hughes-Troutman**, Director, Center for Assessment, Referral, and Education (CARE)
- **Manu Platt**, Associate Professor, Biomedical Engineering
- **Stephanie Ray**, Associate Dean of Students and Director of Diversity Programs
- **Gordon Moore, Jr.**, Executive Director, Student Diversity and Inclusion
- **Damon Williams**, Lecturer and Advisor, Industrial and Systems Engineering

In Fall 2019, Evan Mallen (CTL) and Ruthie Yow (SLS) co-facilitated the CTL Book Club. The group read *Earth in Mind: On Education, Environment, and the Human Prospect* by distinguished environmental educator David Orr. Participants used the book discussion to help them place their own teaching in the context of global environmental challenges and explored the pedagogical resources to support sustainability available at Georgia Tech.

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Partner Events and Initiatives

Instructional Space Working Group

The purpose of this working group was to facilitate communication and coordination among all campus stakeholders who are responsible for designing and supporting instructional spaces at Georgia Tech, including the Registrar, Facilities Design and Construction, Capital Planning and Space Management, and the Office of Information Technology. Vincent Spezzo and Carol Subiño Sullivan served on this committee, which met monthly beginning in October 2019 through March 2020. Its work was interrupted due to the pandemic.

One project underway involves visioning Tech Square Phase 2. As the committee considers creating instructional spaces in a new building that expands Tech Square, they are investigating how these new spaces might impact the demand for instructional spaces across campus as well as how these spaces could impact the circulation of students and faculty in Tech Square.

Supporting Integrity in Education Town Hall

On May 11, CTL partnered with campus units to host a town hall where faculty could share their concerns about academic integrity issues and find ways to address the new realities associated with remote teaching. After highlighting the "cheating spectrum" underway nationally, panelists discussed what Tech faculty could do to deter and address cheating.

- **Nelson Baker**, Dean, Georgia Tech Professional Education
- **Charles Isbell**, Dean, College of Computing
- **Yakut Gazi**, Associate Dean of Learning Systems, Georgia Tech Professional Education
- **David Joyner**, Executive director, Online Education & OMSCS
- **Andrew Lawrence**, Assistant director, Office of Student Integrity
- **Kyla Ross**, Assistant Vice Provost for Advocacy and Conflict Resolution
- **Thad Starner**, Professor, School of Interactive Computing
- **Joyce Weinsheimer**, Director, Center for Teaching and Learning

Vertically Integrated Projects (VIP)

Rebecca Pope-Ruark led a workshop in November 2019 for new VIP faculty on successful student collaboration and Scrum Project management strategies.

Programming

Ongoing Groups

Chancellor's Learning Scholars
In 2018, the University System of Georgia (USG) launched an initiative across its 26 campuses in an effort to foster pedagogical leadership, develop collegiality among faculty, and create course enrichment products for faculty to share. In 2019-2020 five Chancellor's Learning Scholars (CLS) at Georgia Tech led a Faculty Learning Community on a special topic. Below is a listing of the CLS at Georgia Tech and their Faculty Learning Communities (FLC).

Small Teaching: Make Incremental Teaching Changes in Real Time

Facilitated by Chrissy Spencer, Biological Sciences, Senior Academic Professional Co-facilitated by Kerry Wallaert, Educational Policy Studies, Graduate Student, Georgia State University

TiLT Your Teaching

Facilitated by Amy D'Unger, History and Sociology, Senior Academic Professional

In this FLC, participants explored the following questions as they read and discussed *Small Teaching* by James Lang: Do you wonder if your teaching strategies translate into learning for your students? Would you like to try something new in your courses and know if it had an impact on learning? They utilized Lang's summary of small changes faculty can implement in their classes to help their students gain knowledge, understanding, and inspiration on the content and skills participants hope to instill. In addition to collaborating to answer the questions above and asking many more, participants set a goal that participants would each make a small change in their classrooms during the fall semester.

Enid Steinbart, Mathematics, Senior Academic Professional
Krystin Gollihue, Literature, Media, and Communication, Postdoctoral Scholar
Isabel Altamirano, Library, Librarian
Josephine Yu, Mathematics, Associate Professor
Bo Lee, Biological Sciences, Graduate Student
Madeline Gray, Biological Sciences, Graduate Student
Alison Onstine, Biological Sciences, Laboratory Manager
Katherine Samford, Language Institute, Senior Lecturer

In this FLC, participants explored Transparency in Learning and Teaching (TiLT). Transparent teaching and learning focuses on how and why students are learning course content, concepts, and skills in a particular way, and how they will use that learning in their lives after college. Transparent instruction about problem-centered assignments has significant, equitable benefits for undergraduate students.

Isabel Altamirano, Library, Librarian
Mary McDonald, History and Sociology, Professor
Raghuram Pucha, Mechanical Engineering, Senior Lecturer
Rebecca Watts Hull, Serve-Learn-Sustain, Academic Professional

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Chancellor's Learning Scholars (cont.)

Brain-Based Teaching

Facilitated by Christopher Stanzione, Psychology, Lecturer

Small Teaching in the Division of Computing Instruction

Facilitated by Monica Sweat, Division of Computing Instruction, Director and Senior Lecturer

Exploring Healthcare in a Minimester

Facilitated by William Todd, Scheller College of Business, Professor of the Practice

In this FLC, faculty learned about empirically based techniques rooted in neuroscience to enhance student learning. They explored how the brain recalls, recognizes, and relearns information and set goals to embed these techniques in their lectures, exams, and assignments. They aimed to address learning challenges faced by students by introducing these brain-based strategies into their teaching to optimize learning outcomes.

Meghan Babcock, Psychology, Academic Professional
Kelly Griendling, Aerospace, Lecturer
Mirjana Brockett, Biological Sciences, Senior Academic Professional
Enid Steinbart, Mathematics, Senior Academic Professional
Satish Kumar, Mechanical Engineering, Associate Professor
Karie Davis-Nozemack, Scheller College of Business, Associate Professor
Jarek Rossignac, Interactive Computing, Professor
Klara Grodzinsky, Mathematics, Academic Professional
Stacey Doremus, Leadership Education and Development, Assistant Director, LEAD Programs and Systems

This FLC studied the Transparency in Learning and Teaching (TiLT) framework and applied it to most 1000- and 2000-level and a few 3000- and 4000-level College of Computing (CoC) courses. Participants aimed to use the principles of TiLT to reformat some homework assignments to make them more accessible to all students. As part of this work, participants taught TiLT to the 68 new undergraduate teaching assistants (UTAs) for the CoC who are key partners in designing and/or formatting these assignments.

Dan Forsyth, College of Computing, Associate Director of Research and Instruction (TSO), Senior Research Technologist
Gerandy Brito, College of Computing, Lecturer
Amanda Girard, College of Computing, Academic Professional
Mary Hudachek-Buswell, College of Computing, Lecturer
Richard Landry, College of Computing, Lecturer
Melinda McDaniel, College of Computing, Lecturer
Mark Moss, College of Computing, Lecturer
Aibek Musaev, College of Computing, Lecturer
Fisayo Omojokun, College of Computing, Senior Lecturer
Caleb Southern, College of Computing, Lecturer
Cedric Stallworth, College of Computing, Assistant Dean for Outreach, Enrollment and Community; Senior Lecturer
John Stasko, College of Computing, Regents Professor

This FLC involved a course design project that is an outgrowth of the minimester concept proposed by the Commission on the Next in Education. This short course was taught by three faculty from three different colleges and supported by two other faculty members from two colleges. FLC participants, who came from the Scheller College of Business (Strategy & Innovation and Law & Ethics), Ivan Allen College (Public Policy and LMC), and the College of Engineering (ISYE), designed a course that embedded an emphasis on writing, speaking, and ethics into the curriculum.

Richard Barke, Public Policy, Associate Professor
Karie Davis-Nozemack, Scheller College of Business, Associate Professor
Karen Head, Literature, Media, and Communication, Associate Chair
Pinar Keskinocak, Industrial and Systems Engineering, Professor

A total of **42** Georgia Tech faculty participated in the Chancellor's Learning Scholars Program.

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Programming

Teaching Fellows

Class of 1969 Teaching Fellows
The Class of 1969 Teaching Fellows is an interdisciplinary group of early career faculty who meet regularly for pedagogically focused support and professional development. The Fellows explore evidence-based best practices and new and innovative teaching methods. In addition, the Fellows develop and pilot initiatives that can be used for the education component of major award applications.

A number of the fellows presented their initiatives in posters at Celebrating Teaching Day 2020:

"*Exploring Civil and Environmental Engineering: Engaging Freshmen Early*" by **Emily Grubert**, Civil and Environmental Engineering, Assistant Professor

"*Online Hiring: Does Bias Affect Our Decisions?*" by **Swati Gupta**, Industrial and Systems Engineering, Assistant Professor, and **Jad Salem**, Mathematics, Graduate Student

"*Preparing Modules for Group Music Technology Engineering*" by **Grace Leslie**, Music, Assistant Professor, and **Mike Winters**, Music Technology, Graduate Student

"*Data Science Education in Science*" by **Wenjing Liao**, Mathematics, Assistant Professor

"*In-Class Engagement and Guided Instruction in Technical Design Courses: A Pilot Project in Medical Imaging Systems Instruction*" by **Brooks Lindsey**, Biomedical Engineering, Assistant Professor

"*Hands-on Learning for Motion Controls Using a Tabletop Quadrotor Platform*" by **Yi Mazumdar**, Mechanical Engineering, Assistant Professor

Class of 1969 Teaching Fellows
Joy Arulaj, Computer Science, Assistant Professor
John Blazeck, Chemical and Biomolecular Engineering, Assistant Professor
Justin Burkett, Economics, Assistant Professor
Emily Grubert, Civil and Environmental Engineering, Assistant Professor
Swati Gupta, Industrial and Systems Engineering, Assistant Professor
Shu Jia, Biomedical Engineering, Assistant Professor
Grace Leslie, Music, Assistant Professor
Wenjing Liao, Mathematics, Assistant Professor
Brooks Lindsey, Biomedical Engineering, Assistant Professor
Ellen Mazumdar, Mechanical Engineering, Assistant Professor
Chengzhi Shi, Mechanical Engineering, Assistant Professor
Tuo Zhao, Industrial and Systems Engineering, Assistant Professor
Ye Zhao, Mechanical Engineering, Assistant Professor
Mayya Zhilova, Mathematics, Assistant Professor

Provost Teaching and Learning Fellows
The vision for the Provost Teaching and Learning Fellows (PTLF) program is to connect the expertise of evidence-based teaching and learning professionals in the Center for Teaching and Learning with the expertise of disciplinary faculty in each college/school. The goal of this hub-and-spoke model is to strengthen teaching and learning in the disciplines through an embedded system of on-going instructional support and special initiatives.

The 2018-2020 cohort of Provost Teaching and Learning Fellows was in the second year of their fellowship when COVID-19 changed the campus landscape. Before dispersing mid-spring semester, the PTLFs were engaged in an array of initiatives that targeted specific college needs. In addition, each PTLF team was working to engage their faculty in promoting academic well-being. Striving to improve Georgia Tech's learning environment, PTLFs conducted meetings with their administrators, led discussions with their colleagues in faculty meetings and workshops, and talked with students about enhancing their educational experience at Georgia Tech.

Provost Teaching and Learning Fellows
Polo Chau, Computational Science and Engineering, Associate Professor
Christina Choi, Industrial Design, Associate Professor
Flavio Fenton, Physics, Professor
Tom Fuller, Chemical and Biomolecular Engineering, Professor
Carla Gerona, History and Sociology, Associate Professor
Narin Hassan, Literature, Media, and Communication, Associate
Manpreet Hora, Scheller College of Business, Associate Professor
Ruth Kanfer, Psychology, Professor
Gordon Kingsley, Public Policy, Associate Professor
Santosh Pande, Computer Science, Associate Professor
Kamran Paynabar, Industrial and Systems Engineering, Associate Professor
Dong Qin, Materials Science and Engineering, Associate Professor
Devesh Ranjan, Mechanical Engineering, Associate Professor
Julian Rimoli, Aerospace Engineering, Associate Professor
Charles Rudolph, Architecture, Associate Professor
Jake Soper, Chemistry and Biochemistry, Associate Professor
DJ Wu, Information Technology Management, Professor

48 Georgia Tech faculty representing each of the six colleges participated in CTL's Teaching Fellows programs.

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Programming

Teaching Fellows

Research Faculty Teaching Fellows
The Research Faculty Teaching Fellows (RFTF) program is a partnership between the Executive Vice President for Research (EVPR), the Georgia Tech Research Institute (GTRI), and the Center for Teaching and Learning. This initiative offers research faculty the opportunity to become first-time instructors—or, for those who have taught in the past, the opportunity to turn their cutting-edge research programs into instructional programs that enhance the teaching mission of an academic unit. The Fellows teach one course during their award year while participating in teaching enrichment activities. The Fellows were joined by the Research Faculty Teaching Scholars, other research faculty and postdoctoral scholars who teach, for bimonthly discussions about teaching in the Fall.

Sarah Barnes, History and Sociology, Postdoctoral Scholar

Robert Clark, Georgia Tech Research Institute, Visiting Research Faculty

Joshua Kovitz, Georgia Tech Research Institute, Research Engineer II

Leda Sox, Georgia Tech Research Institute, Research Scientist II

Andrew Stark, Georgia Tech Research Institute, Senior Research Engineer

Hesburgh Award Teaching Fellows
The Hesburgh Award Teaching Fellows brings together mid-career and senior faculty who have demonstrated strength in the classroom and are interested in working on initiatives that further enhance student learning. This is an "invitation" program that honors individuals who are already successful in their own careers and who have the potential of providing leadership in teaching and learning to their colleagues as well.

Hesburgh Teaching Fellows
Faisal Alamgir, Materials Science and Engineering, Associate Professor

JC Gumbart, Physics, Associate Professor

Alexander Lerch, Music, Associate Professor

Peng Qiu, Biomedical Engineering, Associate Professor

Jarek Rossignac, Interactive Computing, Professor

Paul Verhaeghen, Chemistry and Biochemistry, Professor

Hesburgh Teaching Fellows 2020

Faculty Development Workshops

Grading: Are Both Equity and Rigor Possible?
Grading is the teaching interaction most fraught with tension in the faculty-student dynamic. What a faculty member may perceive as upholding rigorous standards, students may view as unforgiving and harsh. Is it possible to be both equitable and rigorous in our approach to grading? In this workshop, participants considered common grading practices through the lens of equity to in order to identify opportunities to restore some humanity to the grading process while still using grades as an accurate reflection of students learning.

Brain-Based Teaching: Using Neuroscience to Enhance Student Learning
Engaging students in active learning is an important goal for any instructor, but how does it work? In this workshop, attendees investigated the science of how we take in, store, access information, and troubleshoot what happens when students fail to learn. This workshop addressed how to foster active learning with teaching practices that support what we know about the neuroscience of learning. The guest facilitator was Dr. Mary Holder, Academic Professional, Neuroscience and Psychology.

A total of **123 participants** attended Faculty Development Workshops and rated the overall effectiveness at 4.71 / 5.00 with 5 being excellent.

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Faculty Development Workshops

Think Globally, Teaching Locally

Graduating global citizens is one of Georgia Tech's strategic goals, yet many students don't have the opportunity to study abroad. What are we doing at home to help students engage in global challenges and develop intercultural communication skills? In this workshop, CTL invited participants to consider how to integrate the United Nations Sustainable Development Goals (SDGs) in their courses. The presenters promoted the idea that the SDGs can be incorporated into any course regardless of discipline. Faculty members from diverse programs at Georgia Tech shared examples of how they have incorporated the SDGs into their courses.

Presenters
Shatakshee Donghde, Associate Professor, Economics
Jairo Garcia, Part-time Lecturer, City and Regional Planning
Britta Kallin, Associate Professor, German
Raghuram Pucha, Senior Lecturer, Mechanical Engineering

Facilitators
Rebecca Watts Hull, Serve Learn Sustain
Evan Mallen, Center for Teaching and Learning
Sebnem Oscam, Atlanta Global Studies Center
Carol Subino Sullivan, Center for Teaching and Learning

96% of the participants attending Faculty Development Workshops rated the overall effectiveness very good or excellent.

FLAMEnet: Helping Students Succeed by Embracing Failure

In many creative industries, failure is highly valued as a key step on the path to success. Willingness to fail enables teams and individuals to tackle big challenges, learn from their mistakes, and iterate to ultimately produce the best possible result. This level of resilience is especially critical in science, where the first try at an experiment rarely yields success in answering the question or achieving the ultimate goal.

Similarly, is it possible to help our students perceive failure in more useful ways? As part of a nationwide collaboration of STEM educators and psychology researchers, Jen Heemstra (Associate Professor of Chemistry, Emory University) and Meredith Henry (Postdoctoral Fellow, Emory University), are investigating how academic interventions drawing from research on mindset, resiliency, and attribution theory can be used in undergraduate classroom and laboratory settings to help students overcome fear of failure and productively respond when failure does occur.

In this workshop, participants learned about the "FLAMEnet" collaborative's findings and how they worked together to develop, implement, and assess educational interventions aimed at promoting student success.

Jen Heemstra, Ph.D.,
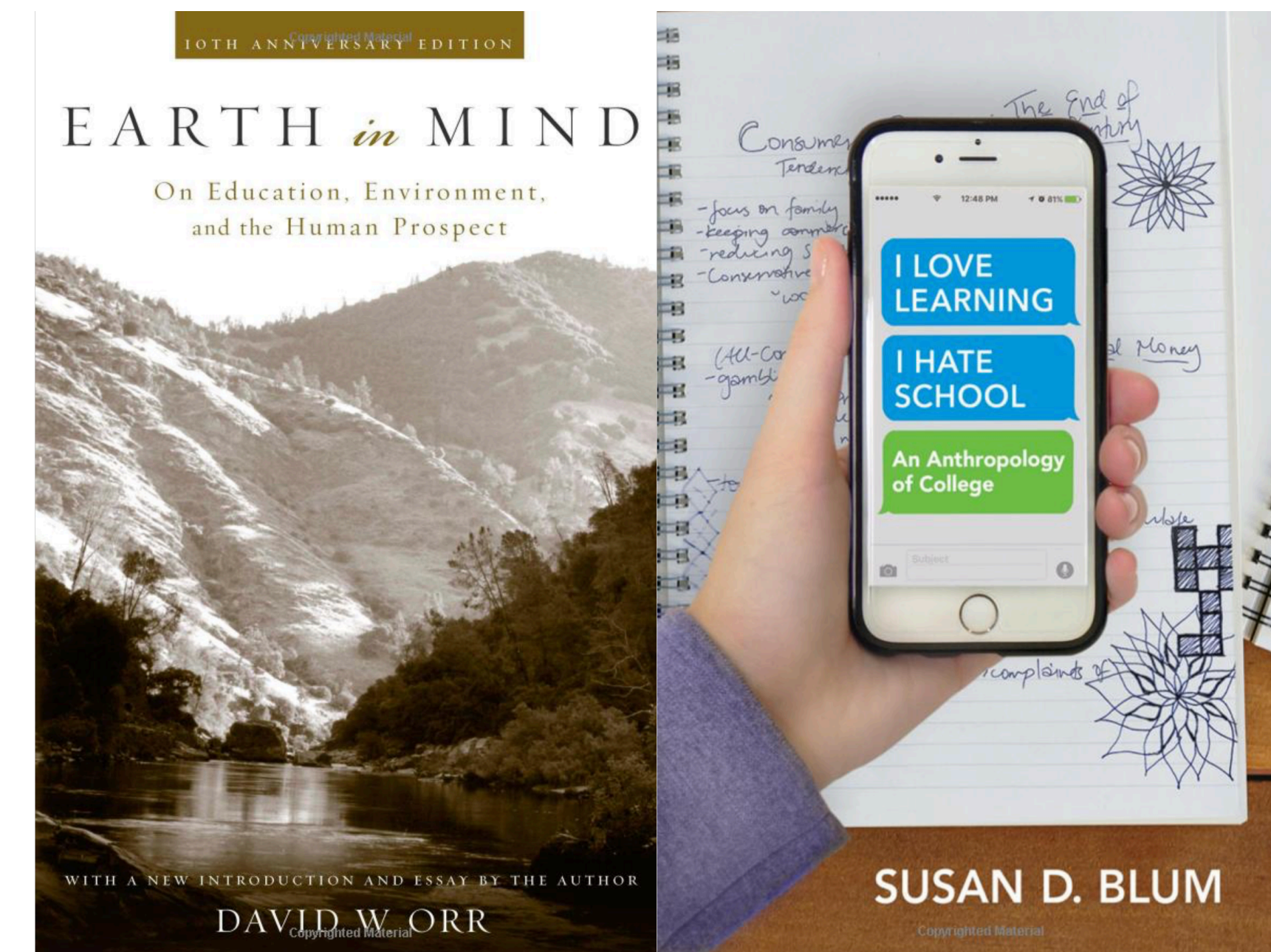Associate Professor, Chemistry
Emory University

Meredith Henry, Ph.D.,
Postdoctoral Fellow, Chemistry
Emory University

Michael Schatz, Ph.D.,
Professor, Physics
Georgia Tech

CTL Book Club

The Center for Teaching and Learning's book club offers an opportunity to meet with a diverse group of faculty, postdocs, and graduate students each semester to discuss books that focus on issues related to teaching and learning in higher education. A lively and relaxed setting with a refreshments provides an ideal environment in which to share teaching experiences and to gather new teaching ideas. Evan Mallen, Postdoctoral Fellow at CTL, led the 2019-2020 book club discussions.

Fall 2019: *Earth in Mind: On Education, Environment, and the Human Prospect* by distinguished environmental educator David Orr.

Spring 2020: *I Love Learning; I Hate School: An Anthropology of College* by Dr. Susan D. Blum

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Faculty Awards and Recognitions

Each year, the Center for Teaching and Learning coordinates campus awards to honor outstanding faculty contributions to the educational mission of Georgia Tech, including the following:

- CTL/BP Junior Faculty Teaching Excellence Award
- Curriculum Innovation Award
- Education Partnership Award
- Faculty Award for Academic Outreach
- Geoffrey G. Eichholz Faculty Teaching Award
- Innovation and Excellence in Laboratory Instruction Award
- Innovation in Co-curricular Education Award
- Scholarship of Teaching and Learning Award
- Student Recognition of Excellence in Teaching: Class of 1934 CIOS Award
- Teaching Excellence Award for Online Teaching
- Undergraduate Educator Award

In Spring 2020, 17 faculty members received teaching excellence awards, winning a combined total of $51,000. CTL annually updates the names of all campus faculty award winners and USG Regents' Teaching Excellence Awards on the CTL Teaching Award Wall on the fourth floor of Clough Commons.

CTL/BP Junior Faculty Teaching Excellence Award ($3000 Each)

- **Marta Hatzell**, *Assistant Professor*, Mechanical Engineering
- **Dan Kotlyar**, *Assistant Professor*, Mechanical Engineering
- **Siva Theja Maguluri**, *Assistant Professor*, Industrial and Systems Engineering
- **A. J. Medford**, *Assistant Professor*, Chemical and Biomolecular Engineering
- **Annalise Paaby**, *Assistant Professor*, Biological Sciences
- **Kate Pride-Brown**, *Assistant Professor*, History and Sociology
- **Wei Wang**, *Assistant Professor*, Industrial Design

Curriculum Innovation Award ($3000)

- **Adjo Amekudzi-Kennedy,** *Professor and Associate Chair for Global Engineering Leadership and Entrepreneurship*, School of Civil and Environmental Engineering

Faculty Award for Academic Outreach ($3000)

- **Cassie Mitchell,** *Assistant Professor*, Biomedical Engineering

Geoffrey G. Eichholz Faculty Teaching Award ($3000 each)

- **Shana Kerr,** *Senior Academic Professional*, Biological Sciences
- **Pamela Pollet,** *Senior Academic Professional*, Chemistry and Biochemistry

Innovation and Excellence in Laboratory Instruction Award ($3000)

- **Colin Harrison,** *Academic Professional*, Biological Sciences

Innovation in Co-curricular Education Award ($3000)

- **Jenny Strakovsky,** *Assistant Director of Career Education and Graduate Programs*, School of Modern Languages

Scholarship of Teaching and Learning Award ($3000)

- **Raghu Pucha,** *Senior Lecturer*, School of Mechanical Engineering

Teaching Excellence Award for Online Teaching ($3000)

- **Michael Schatz,** *Professor*, School of Physics

Undergraduate Educator Award ($3000 each)

- **Benjamin Diden,** *Lecturer* and *Assistant Director of Athletic Bands*, School of Music
- **Mary Hudachek-Buswell,** *Lecturer*, Division of Computing Instruction

Georgia Tech | Center for Teaching and Learning

Faculty Teaching & Learning Initiatives

Georgia Tech Recipients of the University System of Georgia Regents' Awards

Regents' Scholarship of Teaching and Learning Award
Ashok Goel, *Professor*, Computer Science and Chief Scientist, Center for 21st Century Universities

Felton Jenkins, Jr. Hall of Fame Faculty Awards
Don Webster, *Professor and Chair,* Civil and Environmental Engineering

Student Recognition of Excellence in Teaching: Class of 1934 CIOS Award

Forty Georgia Tech instructors were recently recognized for their excellence in teaching during the 2019 calendar year (Spring 2019 and Fall 2019). The sum of student responses on three CIOS scale items constituted the criteria for selection for this award: (#16) Instructor's respect and concern for students; (#17) Instructor's level of enthusiasm about teaching the course; (#18) Instructor's ability to stimulate interest in the subject matter. Ties were broken by response rate.

This award, previously known as the Class of 1940 Course Survey Teaching Effectiveness Award, is one of a number of annual recognition initiatives from the Center for Teaching and Learning (CTL) to honor outstanding teaching. Specifically, the award recognizes faculty members with exceptional scores and response rates on the Course Instructor Opinion Survey (CIOS). CIOS is completed by students at the end of each semester to provide feedback to instructors about the learning experience in their respective courses.

"Faculty who receive the award often remark what an honor it is, especially since it's based on students' feedback about their work in the course," said Joyce Weinsheimer, director of CTL. "At least 85 percent of their students have taken the time to complete CIOS, and these students highly value the instruction they received. There's definitely consensus among the students that this person has helped them learn — and that's always great to hear."

- **Amy Bruckman**, Computer Science, *Professor*
- **Lindsey Rose Bullinger**, Public Policy, *Assistant Professor*
- **Mark Cottle**, Architecture, *Associate Professor*
- **James Dahlman**, Biomedical Engineering, *Assistant Professor*
- **Karie Davis-Nozemack**, Scheller College of Business, *Associate Professor*
- **Adam J Decker**, Biological Sciences, *Senior Academic Professional*
- **Ellen Dunham-Jones,** Architecture, *Professor*
- **John Etnyre**, Mathematics, *Assistant Professor*
- **Lionel Bruno Gall**, Modern Languages, *Senior Lecturer*

- **Nagi Gebraeel**, Industrial and Systems Engineering, *Professor*
- **Thomas Gentry**, Architecture, Associate *Professor*
- **Rudolph Gleason Jr.**, Biomedical Engineering, *Assistant Professor*
- **Claire Greenstein**, International Affairs, *Postdoctoral Fellow*
- **Neha Gupta**, Mathematics, Academic *Professional*
- **Javier Irizarry**, Building Construction, *Associate Professor*
- **Martin Conrad Jacobson**, Biomedical Engineering, GT/Emory *Miscellaneous Faculty*
- **Yongtaek Kim**, Modern Languages, *Associate Professor*
- **Sung-Kyu Lim**, Electrical and Computer Engineering, *Dan Fielder Professorship*
- **Aya McDanie**l. Modern Languages, *Lecturer*
- **Natalia Myshkin**, Modern Languages, *Lecturer*
- **Glaucio Paulino**, Civil and Environmental Engineering, *Professor*
- **Melissa Ann Pilkington**, Modern Languages, *Lecturer*
- **Tarek Rakha**, Architecture, *Assistant Professor*
- **Christopher Rozell**, Electrical and Computer Engineering, *Professor*
- **Brendan Saltaformaggio**, Electrical and Computer Engineering, *Assistant Professor*
- **Benjamin R Shapiro**, Interactive Computing, *Postdoctoral Fellow*
- **Carrie G Shepler**, Chemistry and Biochemistry, P*rincipal Academic Professional*
- **Richard Arthur**, Simmons Strategic Energy Institute, *Senior Research Engineer*
- **John Matthew Smith**, History and Sociology, *Associate Professor*
- **Nicholas Sturm**, Literature, Media, and Communication, *Brittain Fellow*
- **Satomi Suzuki-Shenoweth**, Linguistics, *Lecturer*
- **Peter Swire**, Computer Science and Scheller, *Professor*
- **Samba Sy**, Modern Languages, *Lecturer*
- **William Todd**, Scheller College of Business, *Professor of the Practice*
- **Kari Watkins**, Civil and Environmental Engineering, *Associate Professor*
- **Damon Williams**, Industrial and Systems Engineering, *Lecturer*
- **Kimiaki Yamaguchi**, Modern Languages, *Lecturer*
- **Lisa Yaszek**, Literature, Media, and Communication, *Professor*
- **Alenka Zajic**, Electrical and Computer Engineering, *Professor*
- **Laurina Zhang**, Scheller College of Business, *Assistant Professor*

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives

Teaching with Technology Workshops

Teaching with Technology Workshop

"Sometimes, the most brilliant and intelligent students do not shine in standardized tests because they do not have standardized minds".

- Diane Ravitch, Educational Historian

Understanding and Using Analytics in Canvas

The course and student analytics in Canvas provide valuable insight into how students are engaging with course content, participating in course activities, and performing in course assessments.

This workshop explored the analytics tools in Canvas. The facilitators demonstrated how to make sense of the data available, and discussed how to use data as a means for observing, analyzing, and reflecting on what's happening with students and what actions might be taken to support their learning. In addition, workshop presenters introduced LTI Insights, a new analytics platform that is currently under development at Georgia Tech to aggregate student interaction data from various digital learning tools.

Providing Enhanced Feedback Through Digital Technology

When it comes to providing feedback through digital means, Georgia Tech has no shortage of tools that instructors can leverage to deliver feedback to their students. The challenge becomes selecting the tools that will work best for the specific class and determining how to utilize its features to their fullest so that instructors can focus on creating quality feedback that is enhanced by technology rather than hampered by it. Facilitators in this session discussed the various types of feedback that teachers can provide and explored a variety of digital tools used to optimize time while providing students with the most engaging feedback possible.

Tools to Facilitate Multiple Means of Assessment

Although the thought of providing multiple types of assessments can be overwhelming, technology can be a great help. In this workshop, participants explored a variety of technologies such as Gradescope and Kaltura that make it easier for instructors to create, collect, and provide feedback on assessments that allow for multiple means of action and expression. Facilitators discussed how the principles of Universal Design for Learning (UDL) can aid in creating assessments that allow students to demonstrate their learning. Anne Jannarone, Assistant Dean and Director of the Office of Disability Services, presented information about neurodivergent students at Georgia Tech and what resources are available to assist these students with assessment.

Teaching with Technology TA Orientation Workshop

This workshop, facilitated by a CTL learning technology specialist, provided participants with an overview of the technologies embedded within Canvas that they will commonly use in their new role as a teaching assistant at Georgia Tech. Session topics included monitoring discussion boards, grading, creating assignments, and using Bluejeans (videoconferencing).

103 participated in the Teaching with Technology Workshops.

95% of participants gave the workshops an overall rating of very good or excellent.

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives

Video Based Quizzing

In this spotlight workshop, Dr. Tatiana Rudchenko and Dr. Vincent Spezzo explored the technology and pedagogy behind Interactive Video Quizzes from Kaltura. The workshop facilitators examined how to employ Kaltura to create quizzes that exist inside videos and described how you can best leverage this technology in your own courses. They also discussed the concept of frequent quizzing and explained how such a technique can benefit student learning. Dr. Rudechenko, a faculty member in Scheller who has successfully implemented video quizzing in her own course, shared her experience, lessons learned, and tips for using this technique with your students.

Dr. Tatiana Rudchenko   Dr. Vincent Spezzo   Dr. Jennifer Glass

Wikipedia as a Teaching Tool

In this Spotlight event, Dr. Jennifer Glass, an Associate Professor in the School of Earth and Atmospheric Sciences, discussed how she incorporated a Wikipedia assignment into her teaching. By completing a semester-long Wikipedia editing project on scientific writing on notable topics in environmental sciences, students developed a deep understanding of the course topics. They also developed skills to analyze digital sources of information for accuracy and to collaboratively produce reliable information for various public audiences. While some students found that the assignment could be more tasking and time consuming than they expected, others remarked how they enjoyed this authentic learning activity, and expressed their pride in contributing to something larger than themselves.

Teaching with Technology Spotlights

Georgia Tech | Center for Teaching and Learning

How can video quizzing improve learning outcomes?

A. It makes the content and learning experience more engaging.

B. It helps develop a deeper understanding of the material.

C. It does not help; static learning tools get better results.

D. Both A and B are correct.

3 UN-ANSWERED   QUESTION 2/3

2:45 / 12:55

0:08 / 0:32
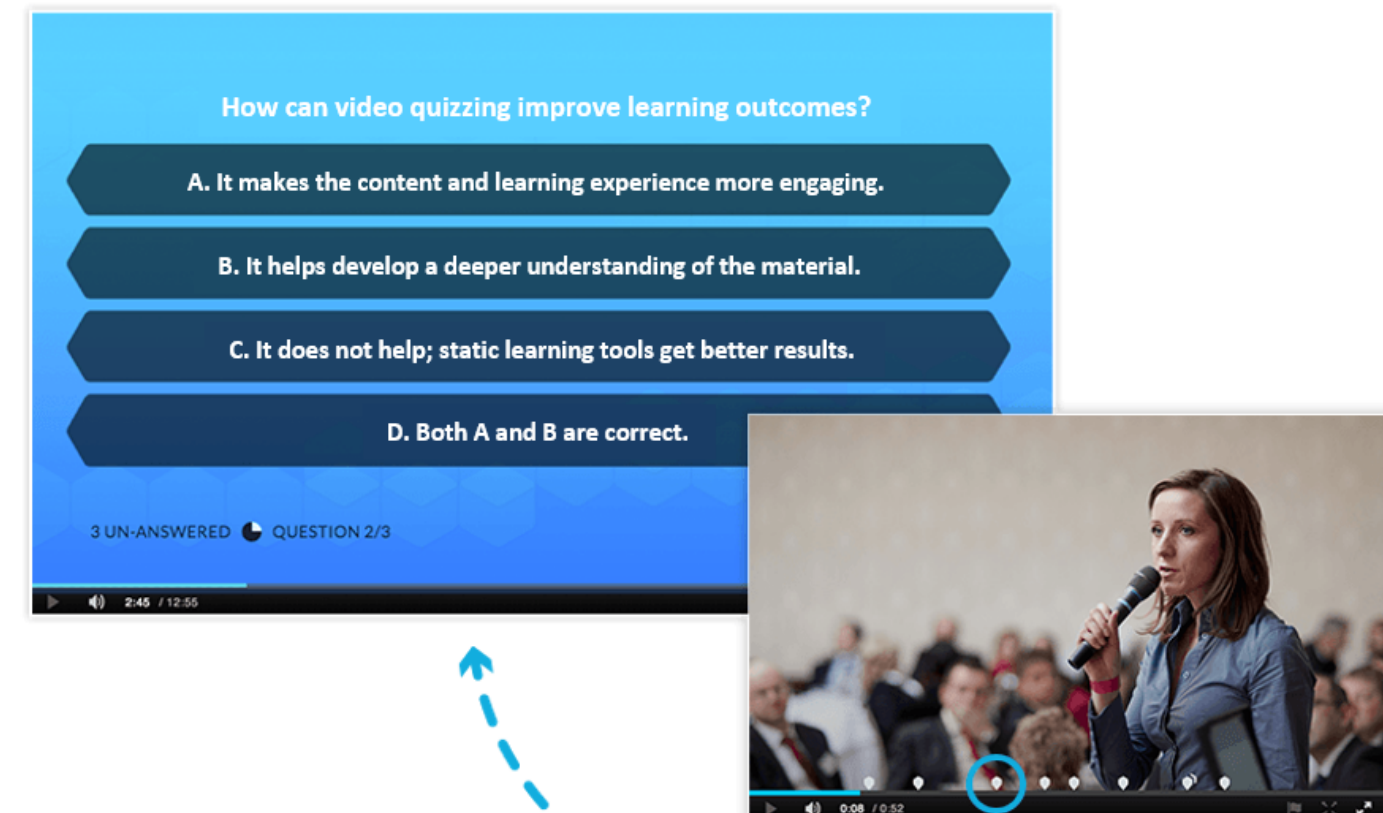
Teaching with Technology Spotlight:
Video Based Quizzing

Thursday, November 14ᵗʰ, 2019

11:30am-1:00pm

Student Center, Piedmont Room

Lunch Provided

**Featuring Dr. Tatiana Rudchenko
& Dr. Vincent Spezzo**

Total Impact Made by Dr. Jennifer Glass' Students through Wikipedia*

79.3K Words Added
785 References Added
13.4 M Article Views
160 Articles Edited
3 Articles Created
17 Commons Uploads

*https://dashboard.wikiedu.org/users/MethanoJen

**Wikipedia as a Teaching Tool
That Empowers Students**

Thursday, Feb. 6 | 12–1 PM
Student Center, Piedmont Room
(Lunch Provided)

55 faculty and staff participated in the Learning with Technology Spotlights.

100% of participants gave the workshops an overall rating of very good or excellent.

Georgia Tech | Center for Teaching and Learning

Teaching with Technology Summer Institute

Summer Institute

In July 2019, CTL conducted its second Teaching with Technology Summer Institute on the theme of "Deep Dive Into Teaching with Canvas." A total of 69 participants attended the institute.

The Teaching with Technology Summer Institute is a learning and technology initiative comprised of a multi-day workshop series focusing on integrating technologies into curriculum to support effective teaching and learning.

During the institute, participants focused on building a course in Canvas by creating interactive course content, engaging course activities, and effective assessment tools that aligned with their course goals and objectives.

The institute consisted of a mix of small-group and large-group sessions, as well as individual work time. Participants engaged in discussions and hands-on workshop activities facilitated by the learning technology specialists from CTL.

A total of **69 participants** attended the four-day Summer Institute and rated its overall effectiveness at **4.71 / 5.00** with 5 being excellent.

To learn more about the Teaching with Technology Summer Institute, please visit http://ctl.gatech.edu/summerinstitute

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives

Teaching with Technology Partnerships

Dr. Tatiana Rudchenko

Scheller College of Business, Lecturer

Creating a Flipped Classroom for a Management Statistics Course

Dr. Aslia Urmanbetova

Economics, Academic Professional

Transforming an Open Textbook with Improved Content and Assessment

Dr. Jacqueline Garner

Scheller College of Business, Senior Lecturer

Student-Created Videos to Enhance the Learning Experience

Teaching with Technology Partnership is a learning and technology initiative that aims to support and promote the effective and innovative use of technology in teaching and learning. The partnerships are a collaboration between faculty, who sponsor a project, and CTL. Chaohua Ou and Vincent Spezzo from CTL meet with individual faculty fellows regularly and serve as a creative partner for developing and implementing their projects. All faculty fellows meet as a cohort once a month for two semesters and discuss their projects, as well as other topics related to teaching with technology.

Three faculty fellows partnered with CTL on their Teaching with Technology projects during 2019-2020. While their projects are very different, they all leverage videos to help enhance teaching and learning. As part of Dr. Tatiana Rudchenko's project, we developed a video to demonstrate the decision-making process through accurate and useful decision trees in different business cases. This video can be accessed at https://mediaspace.gatech.edu/media/1_3hetx8pf. In Dr. Aselia Urmanbetova's project, curated short videos are used extensively through her online textbook to engage students. Dr. Jacqueline Garner empowered her students by having them create their own videos to demonstrate their understanding and applications of course concepts.

2019 - 2020 Teaching with Technology Partnership

Call for Applications (Due by August 5, 2019)
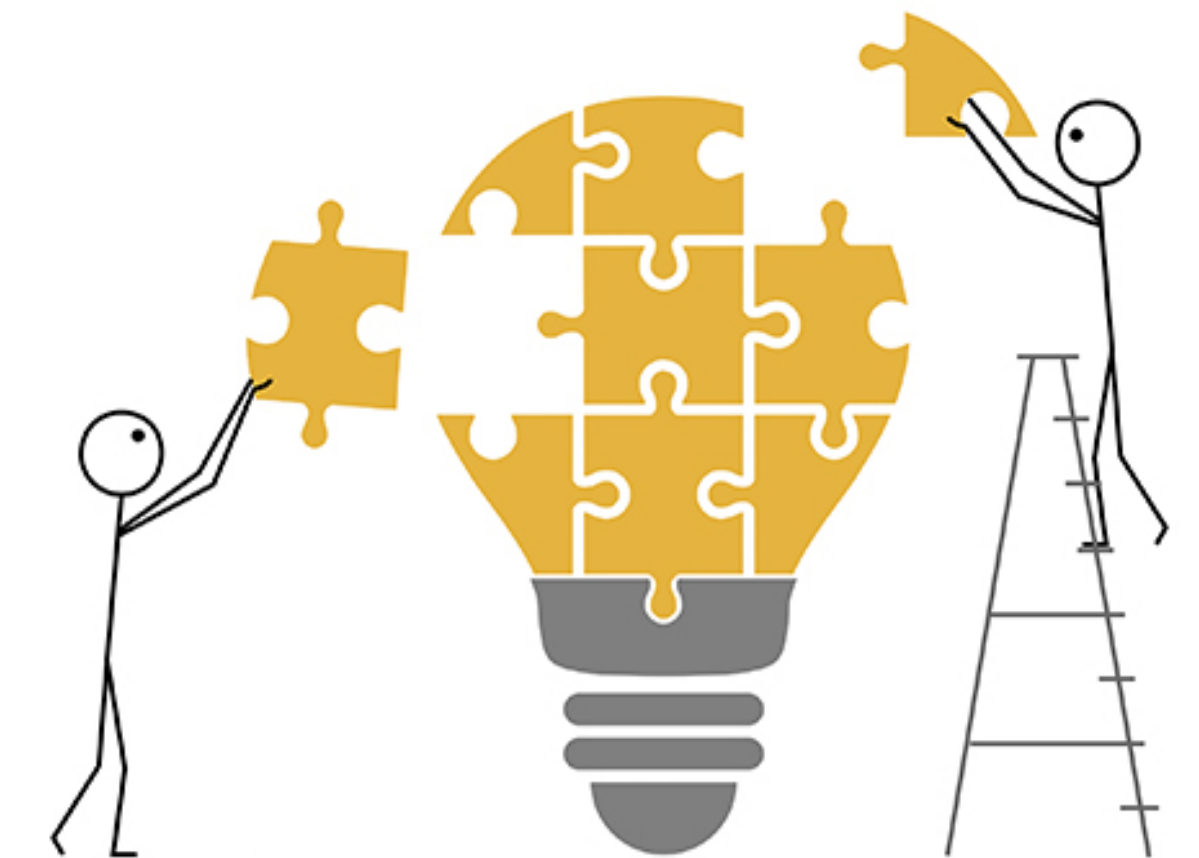
You want to INTEGRATE TECHNOLOGY into teaching and learning.
We want to PARTNER with you.
Together we will turn great ideas into SUCCESSFUL PROJECTS.
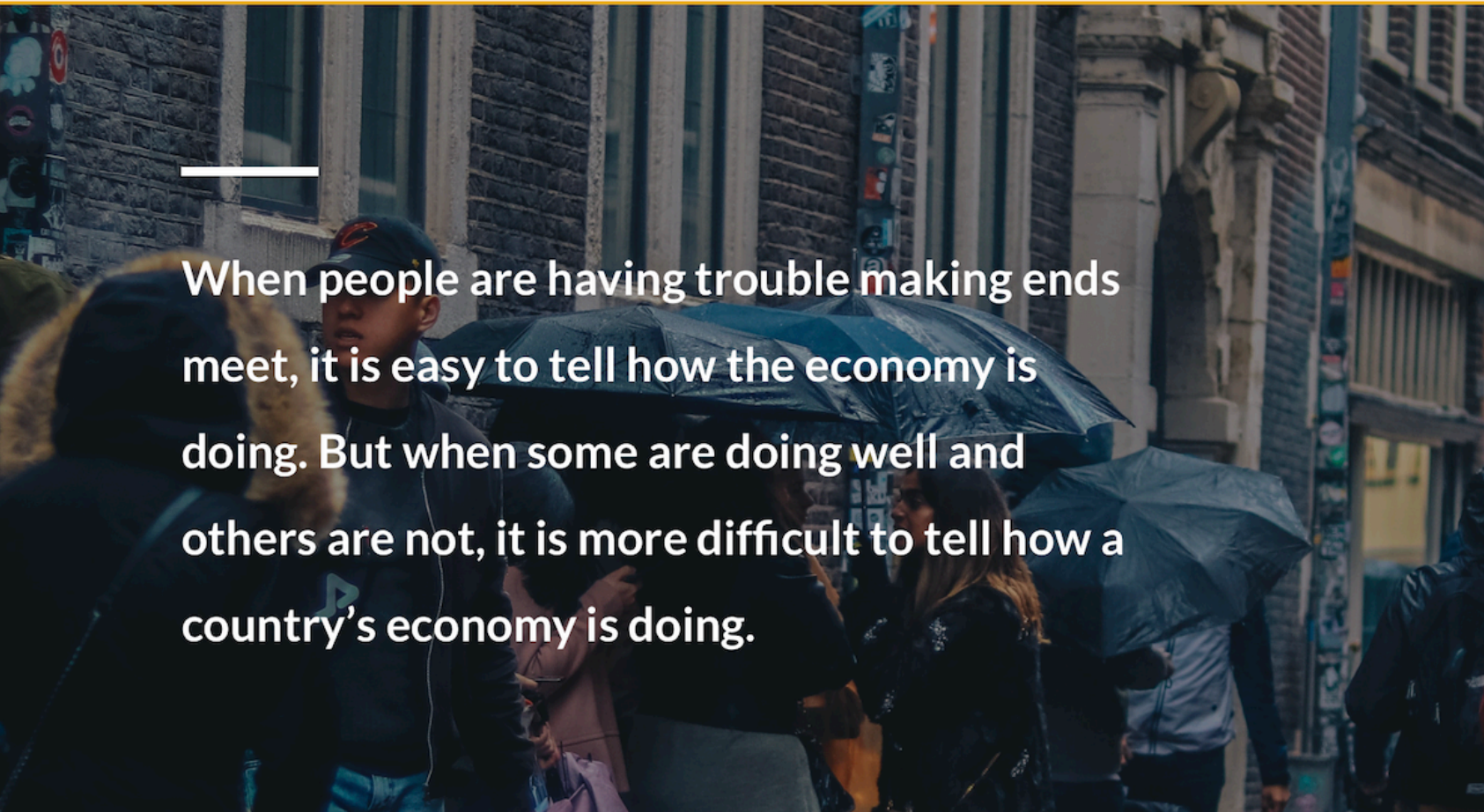
DECISION TREES
The John Thompson Case

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives

Open Educational Resources (OER) Initiative

Supported by a $30,000 grant from Affordable Learning Georgia, Chaohua Ou from CTL and Aselia Urmantbetova from the School of Economics led a team to redesign and improve an open introductory economics textbook, *Principles of Macroeconomics*.   This textbook was completed in Summer 2020, and it is available online for students who are taking ECON 2105 at Georgia Tech, as well as students who study macroeconomics at any school around the world.

The successful transformation of the textbook was accomplished through rigorous application of the following six strategies:

Multimedia Learning. Research-based principles for multimedia learning were utilized as guidelines for presenting the textbook content.

Active Learning. Frequent self-assessment exercises were embedded in the textbook to promote student engagement.

Practice with Feedback. Instant feedback was provided for students on both correct and incorrect answer choices when they practiced with the embedded exercises.

Students as Producers. Several graduate and undergraduate students were recruited to help with content, assessment, and web design under the supervision and guidance of the project leads. These students all had experience with the course. For example, some completed the course as a student, while others worked as teaching assistants or peer tutors in the course. Their perspectives on how the textbook should be designed was an important contribution to the project.

Peer Review. The textbook was reviewed by external experts before it was made available to students.

Student Feedback. Feedback mechanisms were developed to collect student input that will be used for future revision and improvement of the textbook.

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives

Georgia Tech OMS TA Training & Development Course

The Online Master of Science (OMS) TA Training and Development course is housed in Canvas for new and existing Teaching Assistants who are teaching in Georgia Tech's Online Master of Science programs. Through a series of asynchronous modules and synchronous training sessions, the TA participants are provided with an overall orientation to some of the key elements of their job responsibilities and Georgia Tech policies.

The training series features modules on what online TAs need to know about FERPA, Disability Services, Academic Integrity, and online communication, as well information around the technologies and platforms utilized in the OMS programs.

In total during FY 2019-2020 year, 448 OMS TAs participated in one or more of the five modules and four synchronous training offerings. TAs were required to pass an evaluation at the end of each module to earn a completion badge. In total, these TAs successfully completed 1,502 modules.

Total Completed Modules by OMS Teaching Assistants

A bar chart titled "Total Completed Modules by OMS Teaching Assistants" showing approximate values: Technology & Platforms ~200; Online Communication ~140; Academic Integrity ~370; Disability Services ~400; FERPA ~380. X-axis: 0, 125, 250, 375, 500.
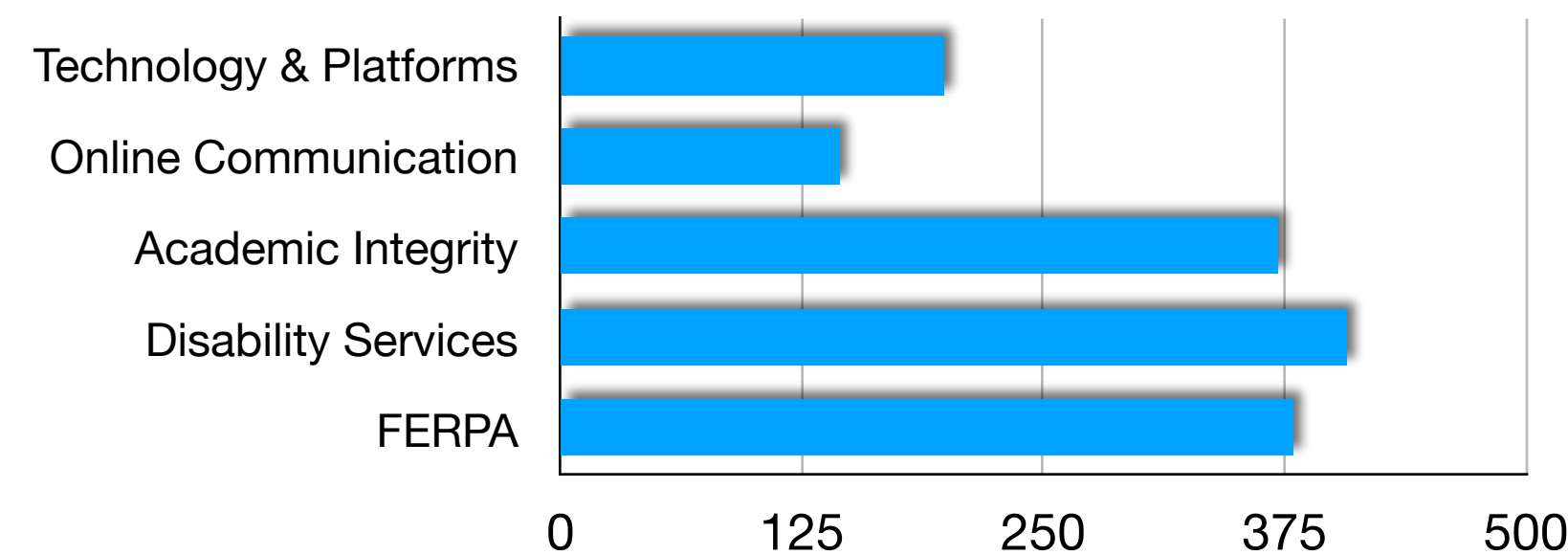
A Collaborative Project

The OMS TA Training and Development course was a collaborative project created and refined over the multiple semesters as a joint effort of the CTL Learning and Technology team and individuals from the CTL TA Development and Future Faculty team, GT Professional Education, and GT Language institute.

The creation of the course involved an in-depth assessment of the training and development needs of OMS Teaching Assistants, review and reconstruction of three existing Online TA Orientation modules to fit the needs of TAs teaching in a fully online environment, and the creation of several new content items such as additional modules and development of synchronous training offerings. While much work has already been completed, more modules and developmental offerings are being planned for future release.

Georgia Tech | Center for Teaching and Learning

Learning and Technology Initiatives
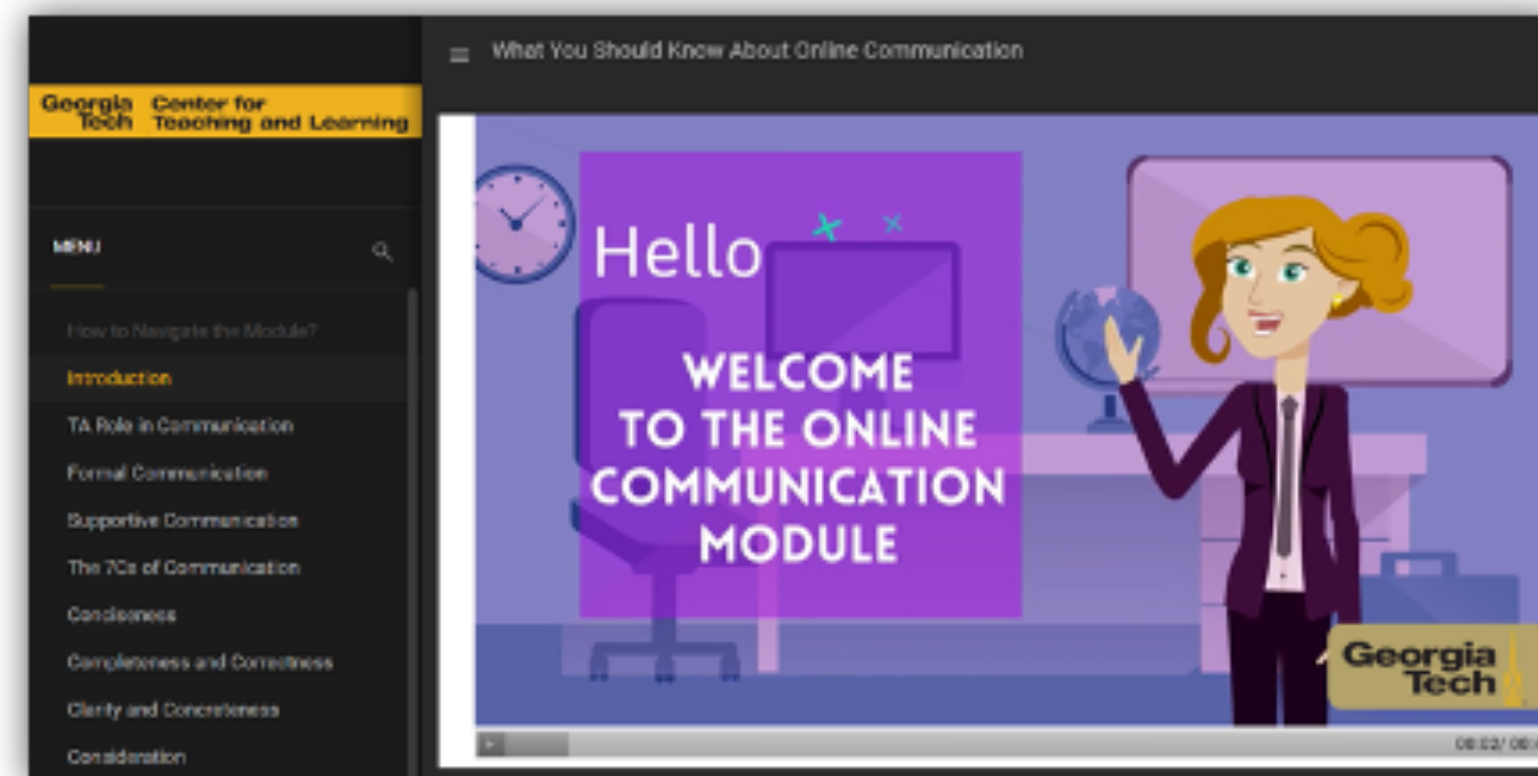
Learning & Technology Campus Partnerships and Outreach

The Learning and Technology team partnered with the faculty teaching and learning team, as well as the TA development and future faculty team (TAFF) in CTL on projects and events that incorporate technologies to enhance teaching and learning. The team also worked with other campus units to support and promote effective use of learning technologies in different learning environments.

Date	Partner(s)	Event	Attendance
6 August 2019	CTL FD	Wise Words: Teaching at Georgia Tech	15
21 November 2019	Library	Understanding and Using Canvas Analytics	20
29 January & 5 February 2020	CTL TAFF	Communication in an Online Environment (online)	9
28 February 2020	Modern Languages	CTL Support Resources & Deep Dive into Kaltura	44
17 March to 2 April 2020	Academic Continuity Work Group	Georgia Tech Remote Teaching Virtual Office Hours (online)	34
24 March 2020	ECE	ECE Faculty Meeting	103
3 April 2020	CEE	CEE Faculty Meeting	23
7 April 2020	CTL FD	Advice from Thank a(n Online) Teacher Recipients (online)	24
30 April 2020	GT Remote Teaching Academy	Course Engagement Best Practices	95
1 May 2020	GT Remote Teaching Academy	Assessment Technologies Overview	74
5 May 2020	GT Remote Teaching Academy	Course Engagement Best Practices	68
6 May 2020	GT Remote Teaching Academy	Assessment Technologies Overview	45
23 June 2020	GT Remote Teaching Academy	Course Engagement Best Practices	12
30 June 2020	GT Remote Teaching Academy	Assessment Technologies Overview	45
9 June 2020	Public Policy	Resources for Remote and Hybrid Teaching	27
Spring and Summer 2020	CTL TAFF PE	GT TA Training and Development -OMS (online)	448
		Total	**1,086**

Using Peer Review in Online Graduate Courses

Supported by the Provost Fund for Excellence in Graduate Studies, the Center for Teaching and Learning worked with the Online Master of Science in Computer Science (OMSCS) program to examine how to leverage peer review to support student success.

A crucial challenge in large-enrollment online courses is how to provide students with individualized formative feedback effectively and efficiently. Peer review is one of the practices addressing this challenge because of its potential benefits for student learning, as well as its advantages of cost-effectiveness and scalability. A few OMSCS classes have used peer review in the past. Through this collaborative project, CTL and OMSCS faculty interviewed students, instructors, and teaching assistants in these classes on their experiences with using peer review in online teaching and learning. The group is analyzing this data and writing a report on the findings which will be shared with the Tech community.

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

"The Tech to Teaching program was a critical component of my graduate education and helped me earn a tenure-track assistant professor position straight from graduate school. I utilized the backward course design framework to develop a new course at Wake Forest and believe this approach made me a more effective and efficient instructor. During the COVID-19 pandemic and transition to remote instruction, I relied on the "student-centered" approach that CTL advocates and strived to adapt and respond to my students' needs as opposed to sticking to a rigid and unrealistic course plan."

Dr. Courtney Di Vittorio
Assistant Professor
Civil Engineering
Wake Forest University

"The Tech to Teaching / CIRTL program at Georgia Tech was a fantastic preparation for teaching at a university. During my first teaching semester as a new faculty member, I was able to directly apply the concepts, techniques, and skills that I had learned as part of this program, which contributed significantly to the success of myself and my students in this class."

Dr. Martijn IJtsma
Assistant Professor
Integrated Systems Engineering
The Ohio State University

Future Faculty Initiatives

The Center for Teaching and Learning offers extensive programming, support, and recognition for teaching assistants at the undergraduate, graduate, and postdoctoral levels, as well as pathways for those interested in a faculty career. In addition to courses in teaching and learning, TAs and future faculty can choose from a number of workshops, online training modules, and other opportunities to increase their knowledge of effective pedagogy in the college classroom.

Teaching Certificate Programs

Tech to Teaching and CIRTL
The Tech to Teaching certificate program helps prepare Georgia Tech graduate students and postdocs for college teaching positions. Participants develop a thorough understanding of the scholarship of teaching and learning and demonstrate their ability to apply skills in the classroom.

When participants complete the ten learning outcomes through a combination of classes, workshops, and online programming, they earn an Associate Certificate from the Center for the Integration of Research, Teaching, and Learning (CIRTL). Next, they complete a significant teaching experience, most often through co-teaching a course or serving as instructor of record, and engage with future faculty peers in a weekly learning community seminar.

In 2019-2020, Tech to Teaching enrolled 276 graduate students and postdoctoral scholars, a 48% increase in enrollment over the previous year. This year, 68 participants earned the CIRTL Associate Certificate, and 49 participants completed the full Tech to Teaching certificate.

Courses
As one route to earning the Tech to Teaching certificate, courses offer an in-depth study of learning theory to prepare future faculty for teaching positions in higher education. This year, 123 graduate students completed one of the three Tech to Teaching courses, a 26% increase from the previous year:

- CETL 8713 Fundamentals in Teaching and Learning
- CETL 8717 Course Design
- CETL 8718 / 8719 Teaching Practicum

Teaching Workshop Series
The teaching workshop series provides graduate students and postdocs the opportunity to explore central tenets of effective pedagogy. A total of 174 participants attended these workshops over the course of the year.

Classroom Observations
Feedback on instructional practices helps novice instructors identify strengths in their emerging pedagogy and opportunities for improvement. In the capstone experience, CTL representatives observe and record live lessons, and provide written feedback. After an observation, participants are encouraged to meet with a CTL representative to discuss topics including learning goals and assessment, instructional strategies, classroom climate, and presentation skills. Each participant in the teaching capstone receives two classroom observations, and other graduate students and postdocs can request individual observations. In 2019-2020, CTL faculty and Graduate Teaching Fellows conducted 96 classroom observations, an increase of 17% over last year.
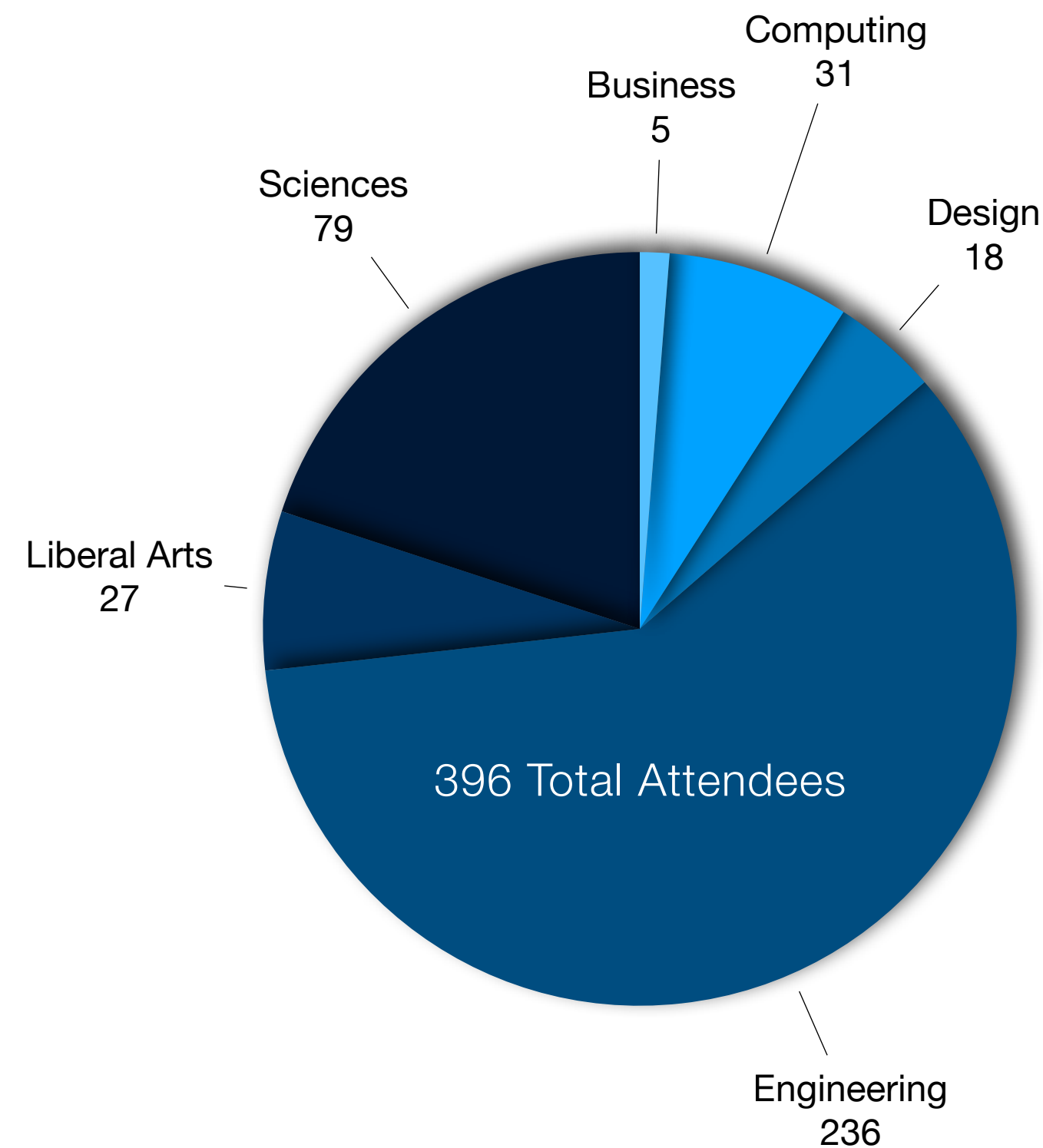
96 classroom observations - **17%** increase
174 teaching workshop participants - **11%** increase
123 students enrolled in CTL courses - **26%** increase

49 Tech to Teaching Certificates and **68** CIRTL Associate-Level Certificates were awarded to graduate students and postdoctoral scholars during FY2019—2020.

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

Workshop Attendance

Computing
31

Business
5

Design
18

Sciences
79

Liberal Arts
27

396 Total Attendees

Engineering
236

396 graduate students and postdoctoral scholars participated in career development and teaching workshops during FY2019—2020.

96% of participants gave the workshops an overall rating of very good or excellent.

Future Faculty Initiatives

Teaching as Research

Teaching-as-Research, or TAR, is the systematic investigation of a teaching challenge of interest. A core pillar in the CIRTL programming, TAR projects can be completed by graduate students and postdocs after finishing the CIRTL Associate Certificate. For example, this year, a postdoctoral scholar in CTL developed the curriculum for and piloted a TAR course to support students in the design of their teaching-as-research projects.

Academic Career Support

Academic Career Workshop Series

CTL offers a series of workshops for graduate students and postdocs to prepare them for all aspects of the faculty hiring process. In the fall, CTL hosted a three-hour bootcamp session and individual workshops throughout the semester, preparing attendees to create an effective job search packet, including writing a CV, a targeted cover letter, and teaching and research statements. The spring bootcamp and workshops focused on conducting successful phone and in-person interviews and giving dynamic job talks.

Individual Consultations

Future faculty entering the academic job market tap into CTL resources through workshops and individual consultations. This year, a total of 203 participants attended academic career workshops on creating the application packet, preparing for interviews, and developing dynamic job talks. In addition, CTL provided individual consultations to 82 graduate students and postdocs about their academic job search.
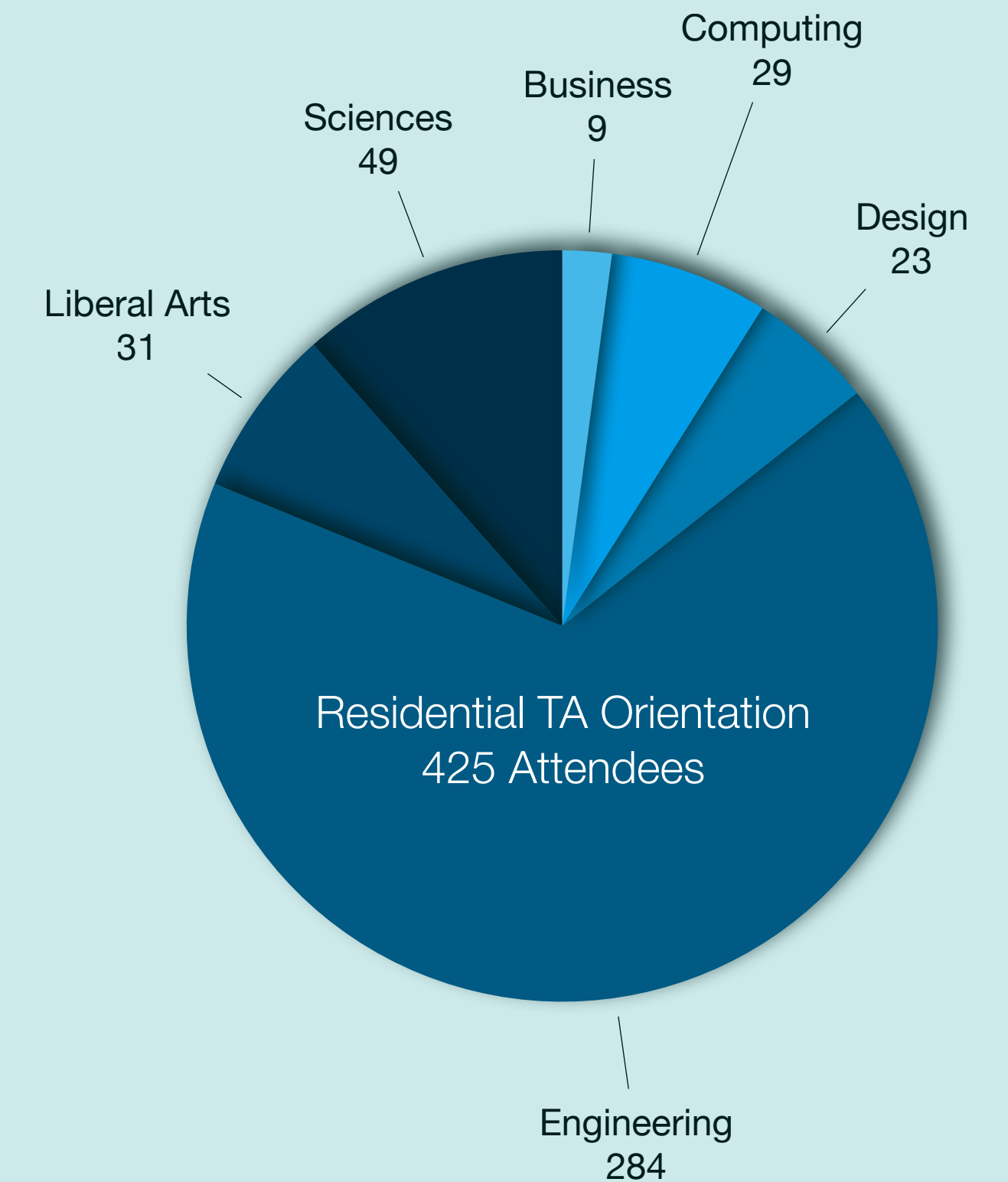
Postdoctoral Development

AGEP

The purpose of the National Science Foundation's Alliances for Graduate Education and the Professoriate (AGEP) program is to increase the number of underrepresented minority (URM) faculty in STEM disciplines and education research. The AGEP alliance connecting Georgia Tech, Rice University, Florida A&M University, and the University of Colorado at Colorado Springs is developing and implementing an innovative model that increases the number of URM engineering postdoctoral scholars who transition successfully into tenure-track faculty positions. CTL's Tammy McCoy provides academic enrichment to the alliance, covering teaching and learning in higher education, course design, and practical teaching experience.

Postdoc Course

Each spring, CTL offers a non-credit course on teaching for postdocs. This year, the course was redesigned to fully align with the Tech to Teaching outcomes, and 15 postdocs completed the course.

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

TA Development Programs

TA Orientation

New undergraduate and graduate TAs serving in traditional residential courses are introduced to their job responsibilities and Georgia Tech policies through a half-day TA Orientation (TAO) session offered just prior to the start of each semester. Participants attended workshops on a range of topics, including teaching tips, presentation skills, and grading. The chart on the right shows the number of new TAs attending by college. New this year, CTL launched a series of online modules for TAs as an alternative to the face-to-face orientation, expanding the total number of TAs who learned about GT policies and procedures to 772, an increase of 52% over the previous year.

The Center for Teaching and Learning partnered with the Online Masters programs to produce a series of synchronous and asynchronous training materials for TAs in the OMS programs. A total of 448 online TAs were trained through these resources.

Pie chart: Residential TA Orientation 425 Attendees

- Sciences 49
- Business 9
- Computing 29
- Design 23
- Liberal Arts 31
- Engineering 284

347 teaching assistants completed the online training modules during FY2019—2020.

448 completed the orientation modules for online teaching assistants.

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

TA Development Programs

CTL 2000, 2001, and 8000

In addition to TA Orientation, new TAs from certain departments develop teaching, tutoring, and other relevant skills through CETL 2000 and 2001 for undergraduate TAs and CETL 8000 for graduate TAs. This year, 241 students enrolled in CETL 8000, and 213 completed CETL 2000/2001.

International Teaching Assistant Program

The International Teaching Assistant (ITA) program began its first official year (after the pilot of 2018-19) with a new program manager, Sarah Kegley. The program offered back-to-back iterations of two five-week workshops in Fall 2019, with a total of 54 (full-time equivalent) students from seven schools. The subsequent Spring 2020 semester began with individual observations of ITAs in their teaching roles of tutor, lab, and/or recitations, completing six observations before the pandemic. Planned spring break 2020 "vacation ITA workshops" were interrupted by the pandemic, but a weekly virtual ITA community meet-up ensued. The program began screening ITAs for Summer 2020 and Fall 2020 in June. Plans are underway for supporting returning and new ITAs in their remote or on-campus roles for Fall.

100% of the participants rated the ITA workshops very good or excellent. The overall rating for all workshops was **4.89 / 5.00** with 5 being excellent.

Institute-Wide Partnerships and Outreach

Preparing Future Faculty Partnerships

Although many graduate students and postdocs learn about CTL's future faculty programming through word of mouth, a growing number of schools have established partnerships with CTL to formalize and encourage their students' participation. These Preparing Future Faculty Partnerships created a consistent flow of students from participating schools, which demonstrates those schools' commitment to fully preparing their graduate students and postdocs for careers in the academy.

Civil and Environmental Engineering (CEE)
Each year, CEE select a cohort of three to five graduate students to join the Preparing Future Faculty program. Selected participants complete the Tech to Teaching program and receive a monetary stipend from CEE to support their ongoing professional development.

Economics
Ph.D. students in the School of Economics are required to participate in the Tech to Teaching program as part of their graduate training. Incoming students complete the Tech to Teaching courses in their first or second year and can become eligible to teach as instructor of record beginning in their third year.

Biomedical Engineering (BMED)
The course BMED 7004 Teaching & Research Practicum I satisfies four of the foundation level outcomes in Tech to Teaching. Participants from this field can use any pathway to satisfy the remaining outcomes and then participate in the teaching capstone.

Industrial & Systems Engineering (ISyE)
The course ISyE 8811 Fundamentals of Teaching & Learning satisfies five of the foundation level outcomes. Participants from ISyE can use any pathway to satisfy the remaining outcomes and then participate in the teaching capstone.

Psychology, Mechanical Engineering, Materials Science & Engineering
These schools offer a teaching practicum course that students may complete instead of the CTL teaching capstone. Students in these practicum courses still participate in the two classroom observations and submit the capstone portfolio to satisfy the capstone learning outcomes.

LEAD (Leadership Education and Development) Program
LEAD hires co-instructors for leadership sections of GT 1000 and for the Public Policy section of PUBP 4140 Foundation of Leadership for PUBP students. Preference for these teaching assignments is given to Tech to Teaching members. The teaching assignment can be used for the capstone requirement.

535 undergraduate and graduate students, postdocs, and faculty participated in TA Development and Future Faculty partnerships.

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

Institute-Wide Partnerships and Outreach

Date	Partner	Event	Attendance if applicable
7 August 2019	Multiple	Academic Well-Being Module for CETL 8000 Instructors	6
14 August 2019	MATH	Intro to CTL Resources (Math CETL 8000 Class)	12
19 August 2019	BME	BME RED FLC (BME Faculty Retreat)	60
3 September 2019	MSE	Workshop: Teaching for Student Learning (MSE Practicum Class)	7
9 September 2019	COC	Grading Workshop for Graduate Teaching Assistants	31
1 October 2019	AE 8801	CTL Resources	Principles of Teaching and Learning	69
17 October 2019	CS 2801	Grading Workshop for Undergraduate Teaching Assistants	118
16 & 21 January 2020	CHEM	Communication Essentials for Scientists Workshop (CHEM 8002 class)	29
27 January 2020	COC	Grading Workshop for Graduate Teaching Assistants	23
11 February 2020	AE 8801	CTL Resources	Principles of Teaching and Learning	60
20 February 2020	CS 2801	Grading Workshop for Undergraduate Teaching Assistants	65
27 February 2020	CS	Well-Being Workshop (CS 2801 UTA Class)	55
		Total	535

535 members of the Georgia Tech community participated in TA Development and Future Faculty partnership and outreach events.

Institute-wide Partnerships and Outreach

Pictured front row: Dr. Tammy McCoy (CTL), Josh Bakin (CRP), Firaz Peer (LMC), Madeline Mei (BIOL), Rafael Marin (ECE), Dr. Kate Williams (CTL)

Pictured back row: Angela Yoo (PSYC), Michael Baldwin (ME), Tongyang Yang (ECON), Ana Maria Estrada Gomez (ISyE), Terri Dunbar (PSYC)

Graduate Teaching Fellows Program

The Graduate Teaching Fellows (GTF) program launched in summer 2018. Designed on the hub-and-spoke model developed for faculty outreach programs, the GTFs consist of a cohort of eight advanced graduate students who serve as peer leaders for teaching development. They designed and delivered TA Orientation, conducted classroom observations and feedback sessions, and independently created individual projects to further support graduate student teaching developing in their home academic unit.

"What I like best about participating in the GTF program is that it has connected me to people across campus who are incredibly passionate about teaching. These connections have inspired me to continually improve and reflect on my own teaching as well as help support effective instruction for students across campus."

- Terri Dunbar, GTF

Georgia Tech | Center for Teaching and Learning

TA Development & Future Faculty Initiatives

TA & Future Faculty Awards

Each year, CTL celebrates the contributions to teaching excellence at Georgia Tech made by our graduate and undergraduate teaching assistants. Graduate and undergraduate TA Award winners, Tech to Teaching and CIRTL certificate recipients, student Thank-A-Teacher recipients, and TA Fellows were recognized for excellence in teaching. Awards are usually given at the annual TA and Future Faculty event, but due to the coronavirus Spring shutdown, awards this year were announced via a two-part email.

The annual awards process opened in January. CTL requested all schools/departments conduct an internal competition to produce one person per each category: (1) Graduate Student Instructor of the Year; (2) Graduate Teaching Assistant of the Year; and (3) Undergraduate Teaching Assistant of the Year. Each school-level winner was invited to submit an application to participate in the institute-wide TA of the Year competition.

School / Department Award Recipients

Graduate Student Instructor

Aditya Anupam, LMC
Camila Apablaza, PUBP
Mario Bianchini, HTS
Yoan Delchev, MATH
Peter Griffiths, ME
Anthony Harding, ECON
Kate Kidwell, PSYC
Peter Simasek, BUS
Umesh Unnikrishnan, AE
Ningquan Wang, ECE

Graduate Teaching Assistant

Abigail Advincula, MSE
Karim Farhat, PUBP
Gabriel Gusmao, CHBE
Seyma Guven Kocak, ISYE
Cvetelina Hill, MATH
John Johnson, BIOL
Zoe Klesmith, ME
Bon Woo Koo, CRP
Ming Liu, CEE

Graduate Teaching Assistant

Alicia Martinez, INTA
Sara Miller, AE
Shauna Morrisey, MUS
Lacey Perdue, BMED
Elaine Rhoades, PHYS
Justin Sabree, PSYC
Kartik Sastry, ECE
Yushuo Yang, ECON

Undergraduate TA

Jacob Allen, COC
Tristan Gaskins, ME
Brandon Kang, ISyE
Nisha Kashyap, BIOL
Caroline Kish, COC
Connor McMahon, ECE
Max Poff, MATH
Monica Rizk, ARCH
Caterina Rossie, BIOL
Sara Tonks, EAS

Aditya Anupam
Literature, Media, and Communication

Yoan Delchev
Mathematics

Anthony Harding
Economics

Georgia Tech | Center for Teaching and Learning
2020 Georgia Tech
GRADUATE STUDENT INSTRUCTOR OF THE YEAR
CONGRATULATIONS!

Cvetelina Hill
Mathematics

Elaine Rhoades
Physics

Yushuo Yang
Economics

Georgia Tech | Center for Teaching and Learning
2020 Georgia Tech
GRADUATE TEACHING ASSISTANT OF THE YEAR
CONGRATULATIONS!

Brandon Kang
Industrial and Systems Engineering

Caroline Kish
Computer Science

Max Poff
Mathematics

Georgia Tech | Center for Teaching and Learning
2020 Georgia Tech
UNDERGRADUATE TEACHING ASSISTANT OF THE YEAR
CONGRATULATIONS!

Georgia Tech | Center for Teaching and Learning

CTL Online Resources
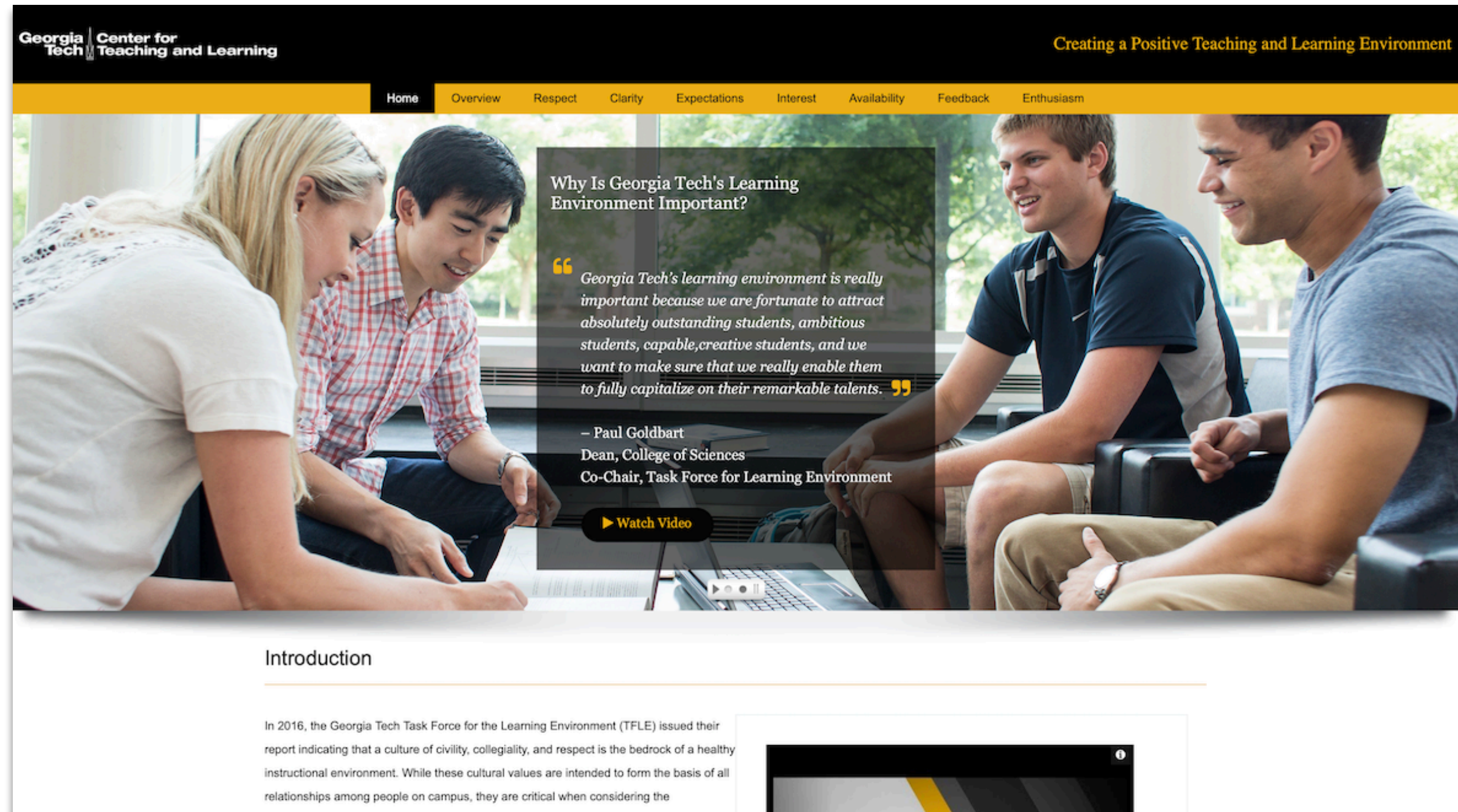

Creating a Positive Teaching and Learning Environment: An Online Toolkit for Faculty

In 2016, the Georgia Tech Task Force for the Learning Environment issued their report indicating that a culture of civility, collegiality, and respect is the bedrock of a healthy instructional environment. In response to this report, CTL was tasked with developing an online toolkit to help faculty recognize how instructional strategies and interactions with students contribute to a positive learning environment. One of the goals of this online resource is for faculty members to understand how the values of civility, collegiality, and respect translate into concrete strategies and measures that are considered effective teaching. The content of the Toolkit aligns directly with the student perceptions of teaching effectiveness found in the Course Instructor Opinion Survey (CIOS).

TA Online Training Program

CTL offers a variety of resources to enhance the teaching effectiveness of Georgia Tech's undergraduate teaching assistants (UTAs) and graduate teaching assistants (GTAs). CTL TA Development specialists conducted six TA orientations during the academic year, four in fall term and two in the spring term. To support TAs unable to attend these in-person orientations, CTL designed and deployed a series of TA training modules accessible via Canvas, Georgia Tech's learning management system. The modules cover academic integrity, FERPA, and disability services. Each module has interactive components and built-in assessment tools. Upon successful completion of the modules, students can print a document verifying participation.

Visit the website 〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉

347 Georgia Tech graduate and undergraduate teaching assistants completed the online training in FY2019-2020, a **93%** increase from the previous year.

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CTL Online Resources
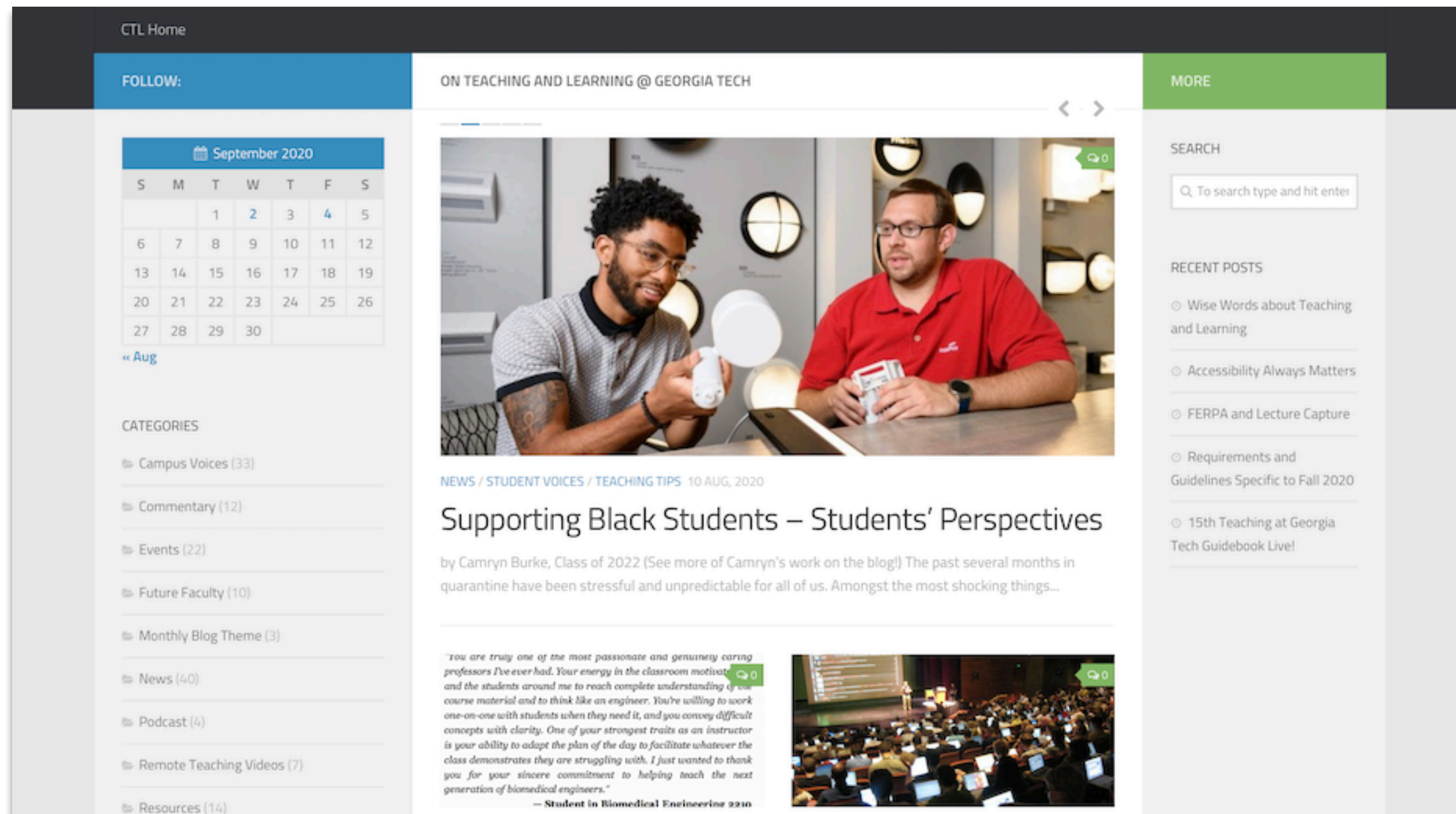
On Teaching and Learning @ Georgia Tech:
CTL News and Resources Blog

On Teaching & Learning @ Georgia Tech, CTL's blog, features a range of articles from CTL staff and various contributors, with content such as teaching tips, inclusive teaching, reviews of workshops, and many more. Our goal with the blog in the days following the campus shutdown in the spring was to provide faculty as many resources as possible quickly. Topics covered included interviews with faculty teaching remotely, student voices about the transition, resources from CTLs at peer institutions, and general encouragement.

[Visit the blog](#) »»»»»»»»»»»»»»»»»»»
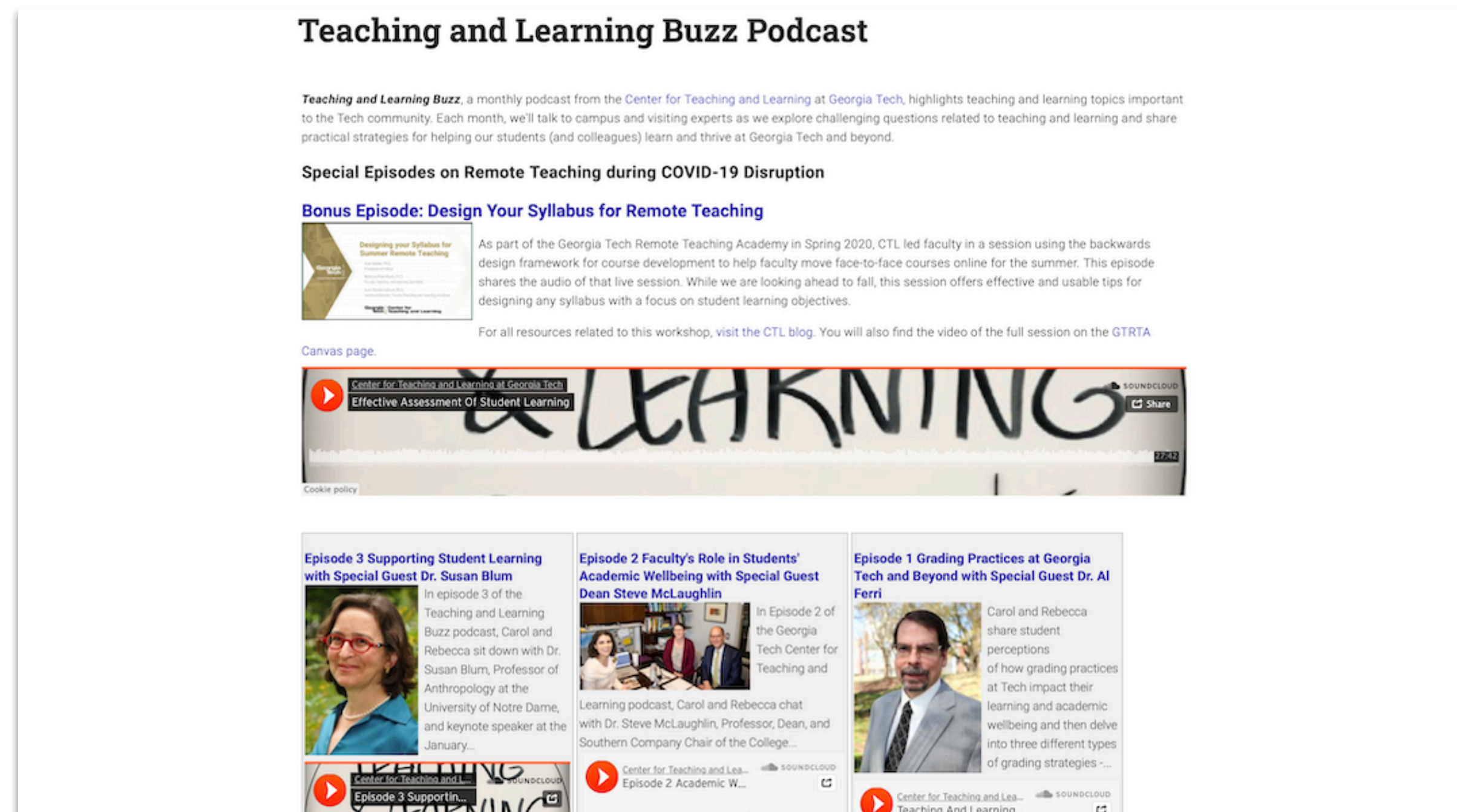
Teaching and Learning Buzz Podcast

Teaching and Learning Buzz, a monthly podcast from the Center for Teaching and Learning at Georgia Tech, highlights teaching and learning topics important to the Tech community. Each month, we talk to campus and visiting experts as we explore challenging questions related to teaching and learning and share practical strategies for helping our students (and colleagues) learn and thrive at Georgia Tech and beyond. The first episodes of the podcast looked at the ethical implications of grading on the curve, student academic well-being, and an interview with Dr. Susan Blum, University of Notre Dame who visited campus to discuss students' "superpowers." Post-spring shut down, the blog compiled interviews with faculty experience teaching online.

[Listen to CTL Podcasts](#) »»»»»»»»»»»»»»»»»»»

Georgia Tech | Center for Teaching and Learning

CTL Online Resources

Teaching at Georgia Tech
A Guidebook for Faculty, Instructors, and Teaching Assistants

Every year, CTL produces a guidebook for instructors. Due to the pandemic, the printed version of the 15th edition was not produced this year. However, an interactive, electronic version of the Guidebook was made available to participants in New Faculty Orientation and part-time faculty at the New Faculty Welcome Event in fall. Instructors of CETL 8000, a TA development course, also use the guidebook as a resource in their classes. The online version of the guidebook is highly interactive with numerous links to additional information and relevant offices. This fully downloadable version of the guidebook also works on tablets and mobile devices.

Access the
Guidebook Online

Inclusive Teaching Strategies

A sense of belonging in relationship to underrepresented students is particularly important since research shows that women, students of color, first-generation students, and economically disadvantaged students are more likely to experience uncertainty about their belonging and potential than majority students. Thus, creating a learning environment that supports all students' need for belonging will foster a student's sense of well-being.

Inclusive teaching strategies include
• Learning students' names; using name tents.
• Providing opportunities for students to

Learning Environment Toolkit, 2nd Edition
Promoting Student Learning and Academic Well-Being at Georgia Tech

A 2nd edition of the Learning Environment Toolkit booklet was created during spring term 2020. The new version of the booklet contains six new pages dedicated to student academic well-being. Grounded in self-determination theory, the new section provides numerous teaching strategies and course design ideas to facilitate a student's need for autonomy, competence, and belongingness. When satisfied, these basic needs contribute to student motivation and a sense of well-being. The booklet also contains an 18-page section on student perceptions of teaching effectiveness and how those perceptions align with Tech's Course Instructor Opinion Survey (CIOS).

Access the Toolkit Online

Georgia Tech | Center for Teaching and Learning

CTL Online Resources

Teaching and Learning Resources

Teaching and learning at Georgia Tech is an exciting endeavor core to the mission of the Institute. In this section you will find quick links to important policies, practices, offices and campus support structures as well as a variety of resources created by the Center for Teaching and Learning to support instructors in the pursuit of excellent teaching.

Access the Resources 〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉

GT Remote and Hybrid Teaching Academy

The GT Remote and Hybrid Teaching Academy was created to prepare Georgia Tech instructors, and when applicable, teaching assistants, for remote and hybrid delivery for the end of spring term as well as summer and fall semester.

The Teaching Academy focused on the fundamental pedagogical and technological skills, as well as best practices. This program was designed and developed through a partnership of Georgia Tech Professional Education, the Center for Teaching and Learning, OIT Digital Learning Team, the Center for 21st Century Universities, the Library, the Center for Inclusive Design and Innovation, CEISMC, and the Summer Session unit of the Office of Undergraduate Education. The asynchronous and synchronous sessions of this program are conducted and facilitated by professionals representing these units.

Access GTRTA 〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉〉

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

The Center for Teaching and Learning Responds to COVID-19*

* This section of the annual report covers CTL's response to COVID-19 from mid-March through September 2020. However, only data collected through 30 June 2020 are reflected in the total numbers found on page 5 of the report.

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

CTL Working Remotely

March 18, 2020 marked the last day any CTL faculty and staff worked on-campus in the Clough Undergraduate Learning Commons due to the coronavirus (COVID-19). Later, the announcement came that students on spring break would not return to campus and that all non-essential employees should work remotely. As a result, Georgia Tech moved to remote teaching and learning for the remainder of the 2020 spring term and throughout the entire summer term.

This section of the annual report documents the contributions of all CTL faculty and staff toward the continuity of excellence in teaching and learning in a remote environment. CTL faculty partnered with various schools to assist in the transition to remote learning and collaborated with other campus units to provide timely resources that would help guide Georgia Tech instructors and teaching assistants in their efforts to teach remotely. Major collaborators involved Center for 21st Century Universities, the Digital Learning Team of the Office of Information Technology, Georgia Tech Professional Education, the Library, Summer Session Initiatives, CEISMC, and the Center for Inclusive Design and Innovation.

Keep Teaching During Uncertain Times

Several CTL faculty developed new large-scale, online resources to assist faculty transitioning from face-to-face teaching to emergency remote teaching. These resources included detailed information about

- Getting started with remote teaching
- Teaching content remotely
- Using lower-stakes assessments instead of high-stakes
- Modifying previously planned assignments
- Communicating with students
- Maintaining accessibility online
- Teaching hands-on courses remotely
- Engaging teaching assistants
- Supporting students' academic well-being
- Collecting student feedback

Visit the website

Keep Teaching Consultation Program

One of the earliest CTL responses to the shift to remote learning was the creation of the Keep Teaching Consultation Request form on CTL's website. Using this form, instructors could request a one-on-one consultation with a CTL specialist to discuss issues of pedagogy and technology relating to remote learning.

Access the Request Form

CTL specialists provided **69** personal consultations with instructors who submitted the Keep Teaching request form between March 18 and June 30.

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

On Teaching and Learning @ Georgia Tech Blog

CTL's blog became an effective vehicle to create resources and share tips quickly and from multiple perspectives. Since mid-March, CTL wrote and posted 36 posts directly related to post-COVID teaching and learning challenges and four posts related to supporting Black students and using anti-racist pedagogies. Blog posts titles are below:

- Keep Teaching: Video Lecture Tips from Georgia Tech Faculty
- Teaching During—and About—a Crisis
- Making the Rapid Shift to Remote Learning
- Keep Teaching: How Do You Teach a Lab Course Remotely
- Keep Teaching: Working Remotely with International Students Part 1
- Keep Teaching: Working Remotely with International Students Part 2
- Human Elements in the (Virtual) Classroom
- Keep Teaching: Advice from Thank a(n Online) Teacher Recipients
- An Ethic of Care in a Time of Disruption
- Keep Teaching: The Importance on Faculty Community
- TA Talk: Engaging TAs in Remote Teaching and Learning
- Keep Teaching: Remote Teaching Advice Podcast Episode

- Keep Teaching: An Interview with Katherine Samford, Language Institute
- Keep Teaching Podcast: Taking Lab Courses Remote
- Keep Teaching: A Student's Perspective
- Keep Teaching: Student-Centered Remote Teaching
- Summer 2020 GT Remote Teaching Academy
- CTL Recommends: Practical Books on Remote Teaching and Active Learning
- CTL Recommends: Books for Catching up on Teaching Best Practices
- 2020 Design Your Summer Syllabus for Remote Teaching and Learning
- 2020 Effective Assessment of Student Learning – Remote Teaching Academy
- Remote Teaching: Designing Trustworthy Assignments
- How Can Course Design Help Prevent Cheating?
- Revisiting the Differences Between Remote and Online Instruction
- Transitioning to a Remote Instruction Environment
- Day-to-Day Learning Activities in Remote Instruction
- Designing Aligned Assessments
- Inviting COVID-19 into the Classroom
- Fostering a Culture of Health in Our Courses: Hyflex Course Design
- Introducing the Backwards Design Approach to Course Design
- Designing Effective Learning Objectives
- Responsive and Flexible Course Design
- Tech Moving Forward Fall 2020
- Equity and Inclusion in STEM Resources
- Stepping Up to Support Students in the Current Moment
- Design Your Syllabus for Flexible Fall Teaching Workshop Resources
- Active Learning in Flexible Courses
- Anti-Racist Pedagogy Resources

Read the Articles »»»»»»»»»»»»»»»»»»»»

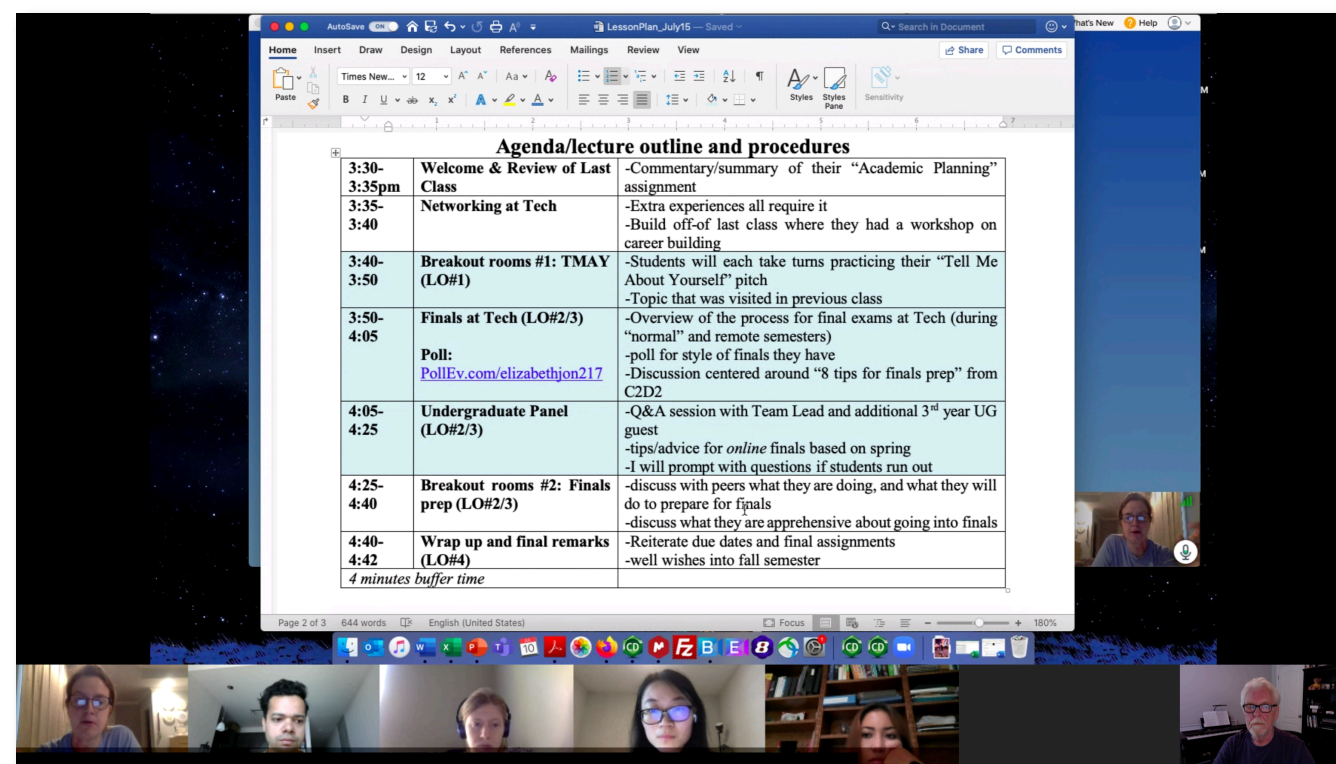## Teaching & Learning Buzz Podcasts

CTL established the *Buzz* podcast in fall 2019, and as we moved into emergency remote teaching used it as a medium for additional content and advice for the second half of the spring semester. We did so by inviting a series of experts and faculty who have taught online to contribute to four episodes and by sharing the audio versions from two of our GTRHTA sessions.

- Keep Teaching: Making the Rapid Transition to Remote Teaching (episode 4) with Dr. David Joyner, Associate Director of Student Experience from the Online Master of Science program in the College of Computing, and Dr. Vincent Spezzo Program Manager of Teaching and Learning Online in the Center for Teaching and Learning CTL.
- Advice from Thank a(n) Online Teacher Recipients (Episode 5) with Dr. Polo Chao, associate professor in Computational Science and Engineering; Dr. Mike Schatz, professor of physics; and Dr. Joel Sokol, professor of Industrial Engineering, CTL's Vincent Spezzo served as co-moderator.

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

- [Taking Lab Courses Remote](#) (episode 6) with Dr. Mike Evans, first-year chemistry lab coordinator in the Department of Chemistry; Dr. Ben Galfond lab coordinator in the School of Chemical and of Biomolecular Engineering; and Dr. Himani Sharma, junior and senior lab program coordinator in the School of Materials Science and Engineering.
- [Learning from Experience with Remote/Online/Face-to-Face Courses](#) (episode 7) with Dr. Mary Hudachek-Buswell, lecturer in the Division of Computing Instruction in the College of Computing.
- [Remote Course Engagement Best Practices](#) (bonus episode) audio version of Dr. Chaohua Ou, assistant director of learning and technology initiatives in the Center for Teaching and Learning, leading a Georgia Tech Remote and Hybrid Teaching Academy session.

CTL Courses

In mid-March, CTL instructors shifted their teaching to a remote learning environment and experimented with various technologies to promote active learning and student engagement. During the 2020 summer term, CTL conducted 20 classroom observations for graduate students and postdocs teaching remotely.

Career Development Workshops

In April 2020, Dr. Kate Williams conducted a career development workshop for graduate students and postdocs about navigating the academic job market during the pandemic.

Teaching Workshops
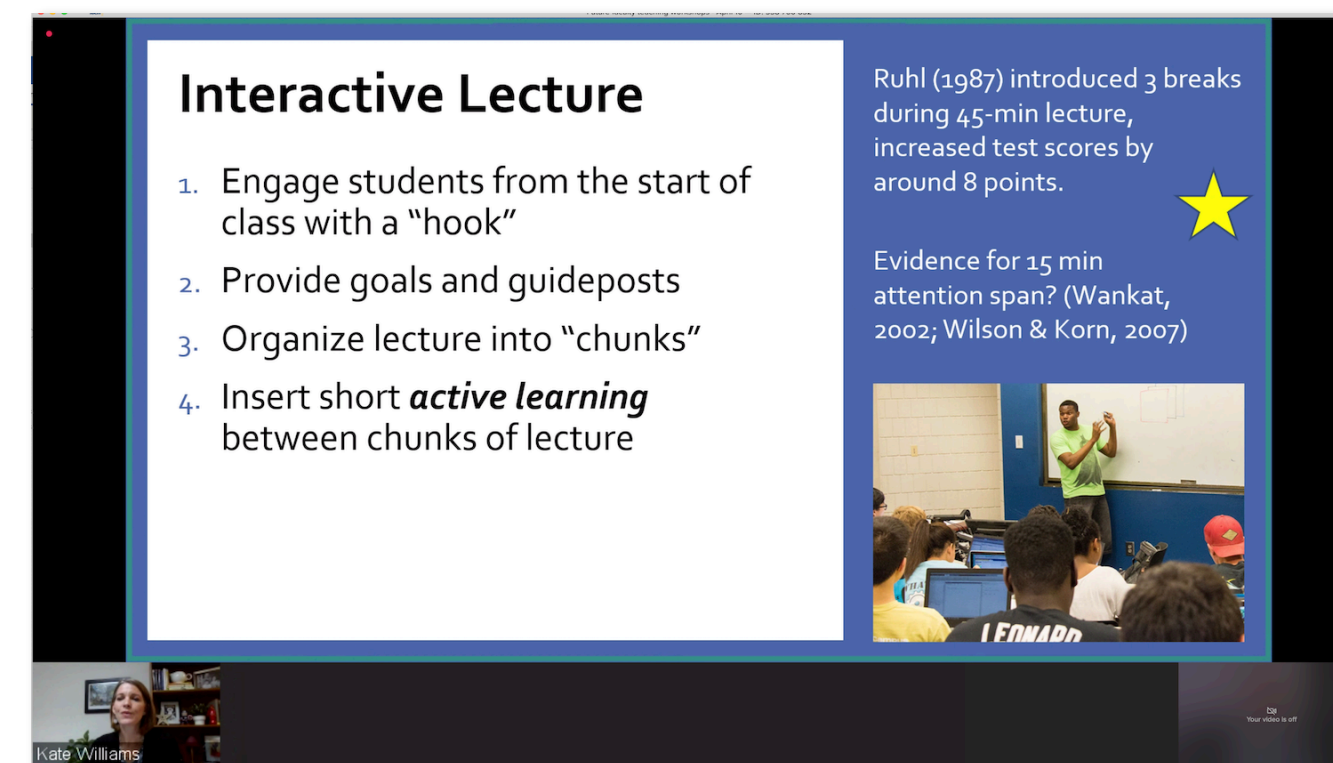
Graduate students and postdocs attended two teaching workshops taught remotely on evidence-based teaching and classroom assessment techniques.

## Remote Learning Student Guide
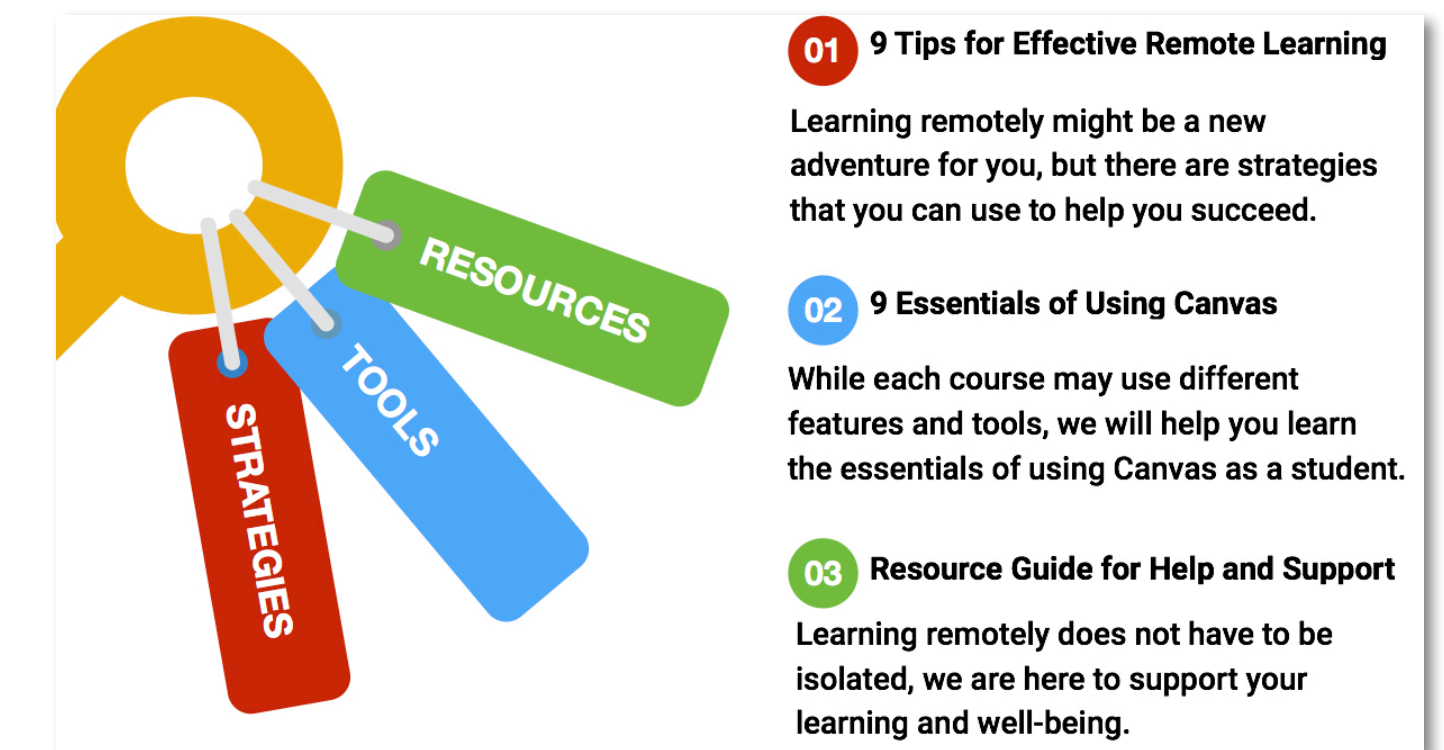
Dr. Choahua Ou developed an [online resource guide](#) that provides students with strategies, tools, and resources to help them navigate their learning in a remote environment.

Using TurningPoint to Promote Interaction & Feedback

Dr. Chaohua Ou created an [online guide to using TurningPoint](#) in a remote learning environment to promote student interaction and feedback.

CTL's Response to COVID-19

## GT Remote & Hybrid Teaching Academy
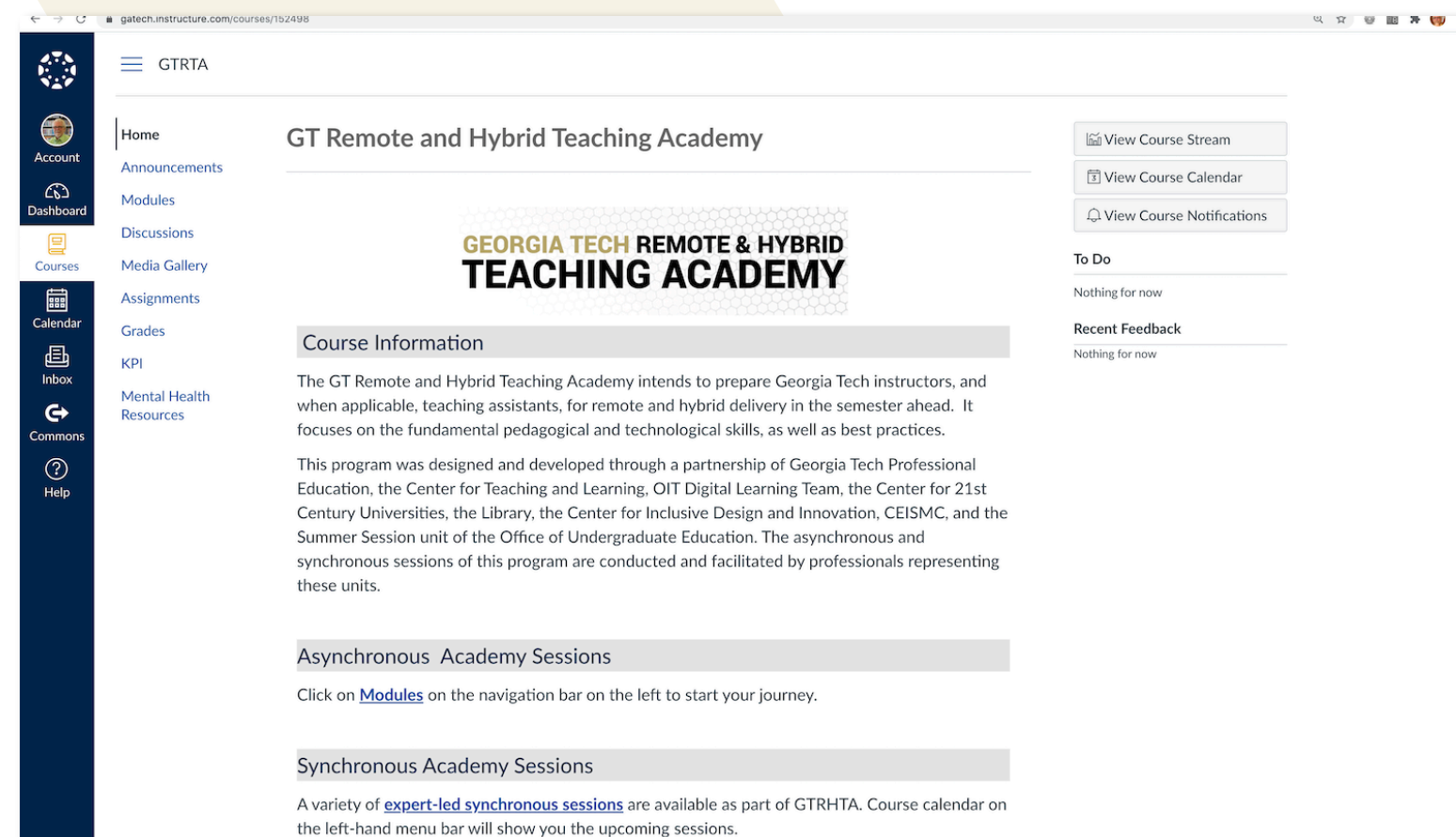
As mentioned earlier in this report, the GT Remote and Hybrid Teaching Academy (GTRHTA) was created to prepare Georgia Tech instructors, and when applicable, teaching assistants, for remote and hybrid delivery for the end of spring term as well as summer and fall semester. CTL faculty contributed significantly to this campus-wide effort, which included the partners below:

- Georgia Tech Professional Education
- OIT Digital Learning Team
- Center for 21st Century Universities
- Library
- Center for Inclusive Design and Innovation
- CEISMC
- Summer Session unit of the Office of Undergraduate Education

CTL's contributions to the Teaching Academy included asynchronous content, synchronous workshops and information sessions, blog posts, podcasts, videos, and online and downloadable resources.

Online Instructional Videos
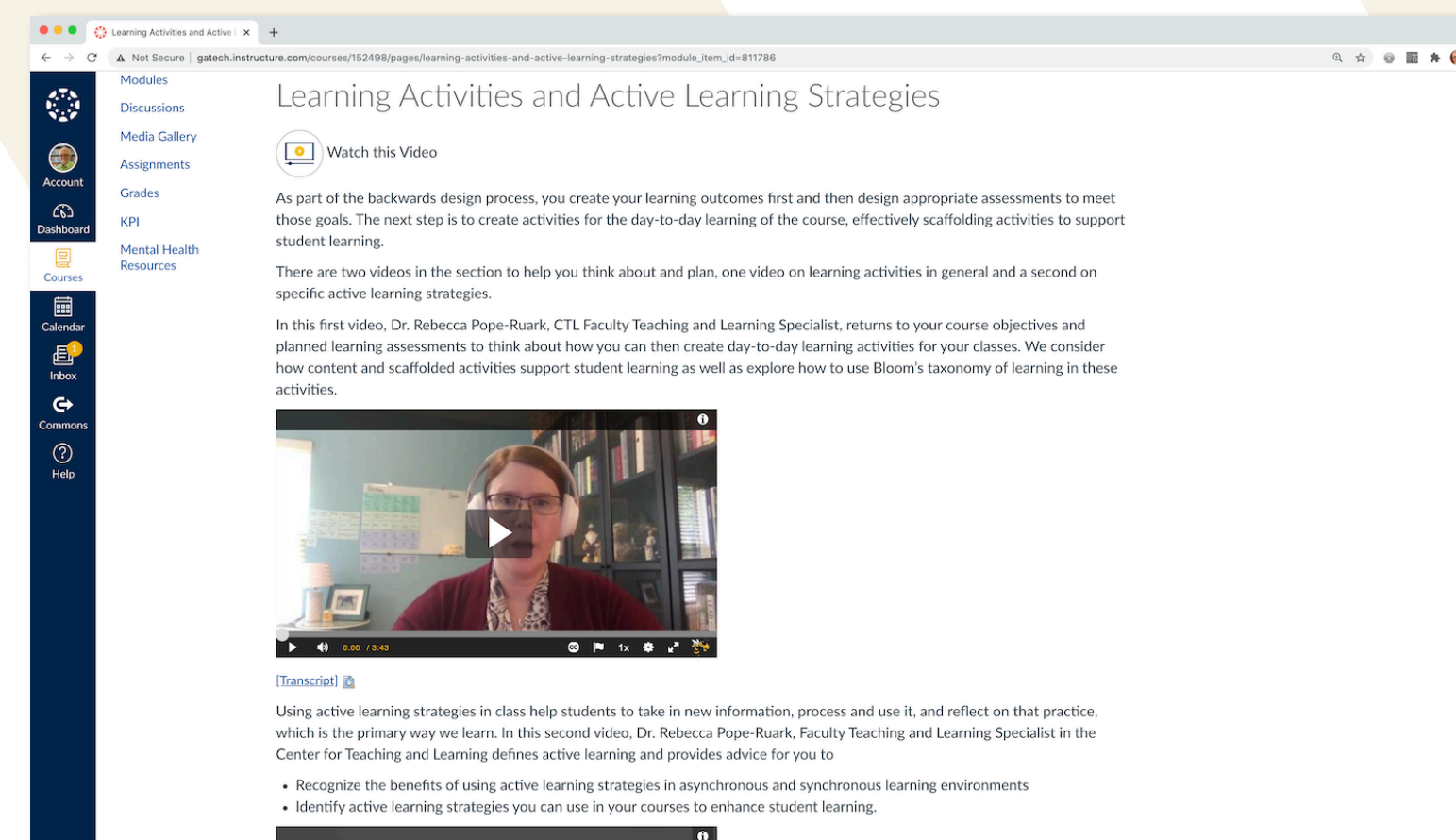
CTL faculty created an array of videos that were embedded within modules on the GTRHTA Canvas website. The content of the videos focused on pedagogical issues confronted by faculty in the transition from residential learning to remote teaching and learning.

- Comparing Emergencyy Remote Instruction and Online Instruction
- Backwards Course Design
- Learning Objectives
- Designing Aligned Assessments
- Day-to-Day Aligned Activities
- Active Learning Strategies
- Designing Aligned Assessments (expanded edition)
- Formative vs. Summative Assessment
- Rubrics
- 9 Tips for Effective Remote Learning
- Strategies for Facilitating Online Discussions

Online Asynchronous Content
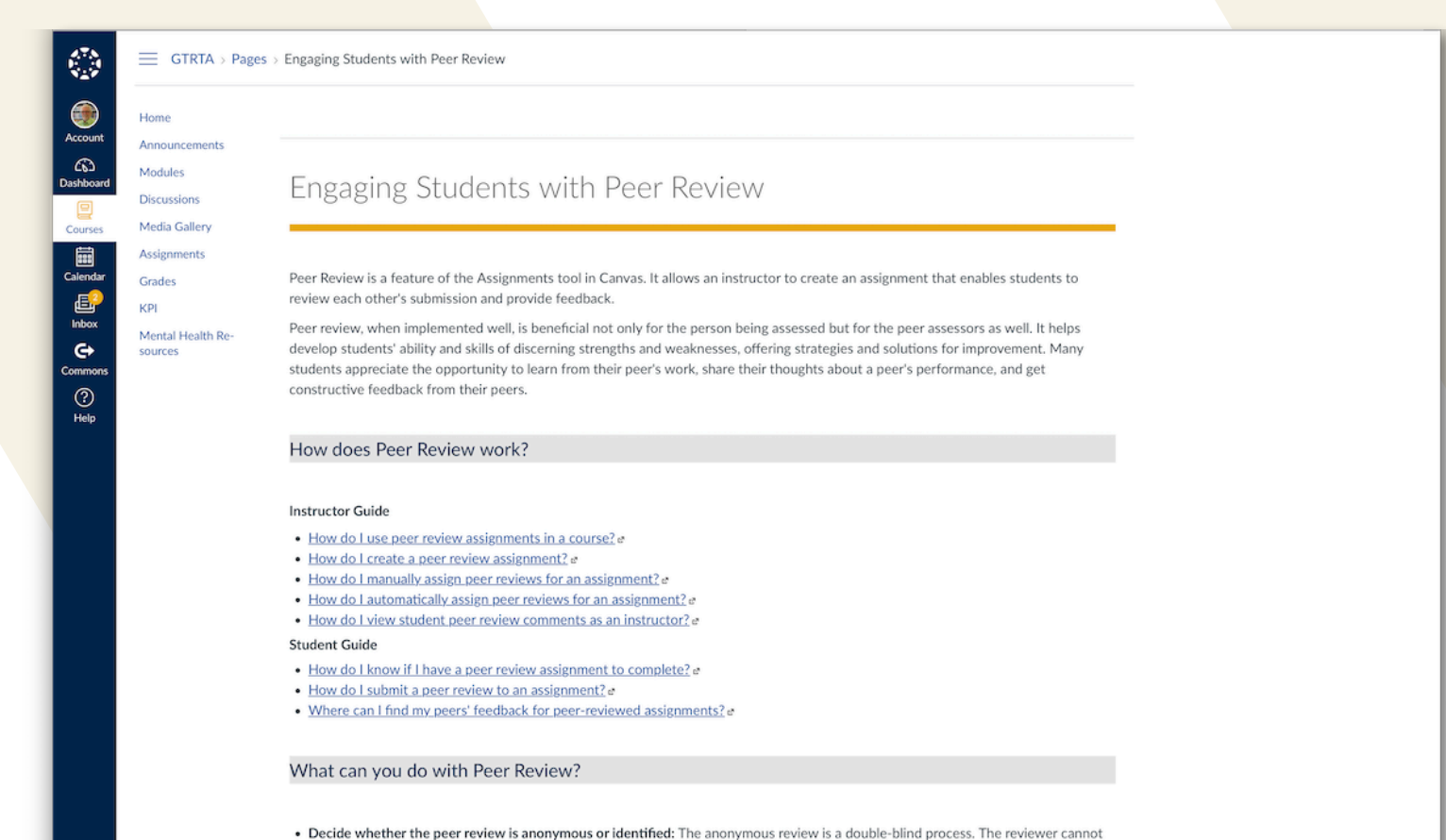
During the development of the Remote & Hybrid Teaching Academy, CTL faculty contributed to the asynchronous content within the course modules listed below.

- Course Engagement Best Practices
  - Engaging Students with Question Polling
  - Engaging Students with Online Discussions
  - Engaging Students with Peer Review
  - Engaging Students with Social Annotation
  - Engaging Students with In-Video Questions
  - Engaging Students with Presentation and Discussions
- Developing and Administering Assessment
  - Assignments
  - Gradescope
  - Kaltura In-Video Quizzes
  - Quizzes and New Quizzes
  - Respondus Exam Authoring
  - TurningPoint
  - VoiceThread

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

Teaching and Technology Studio
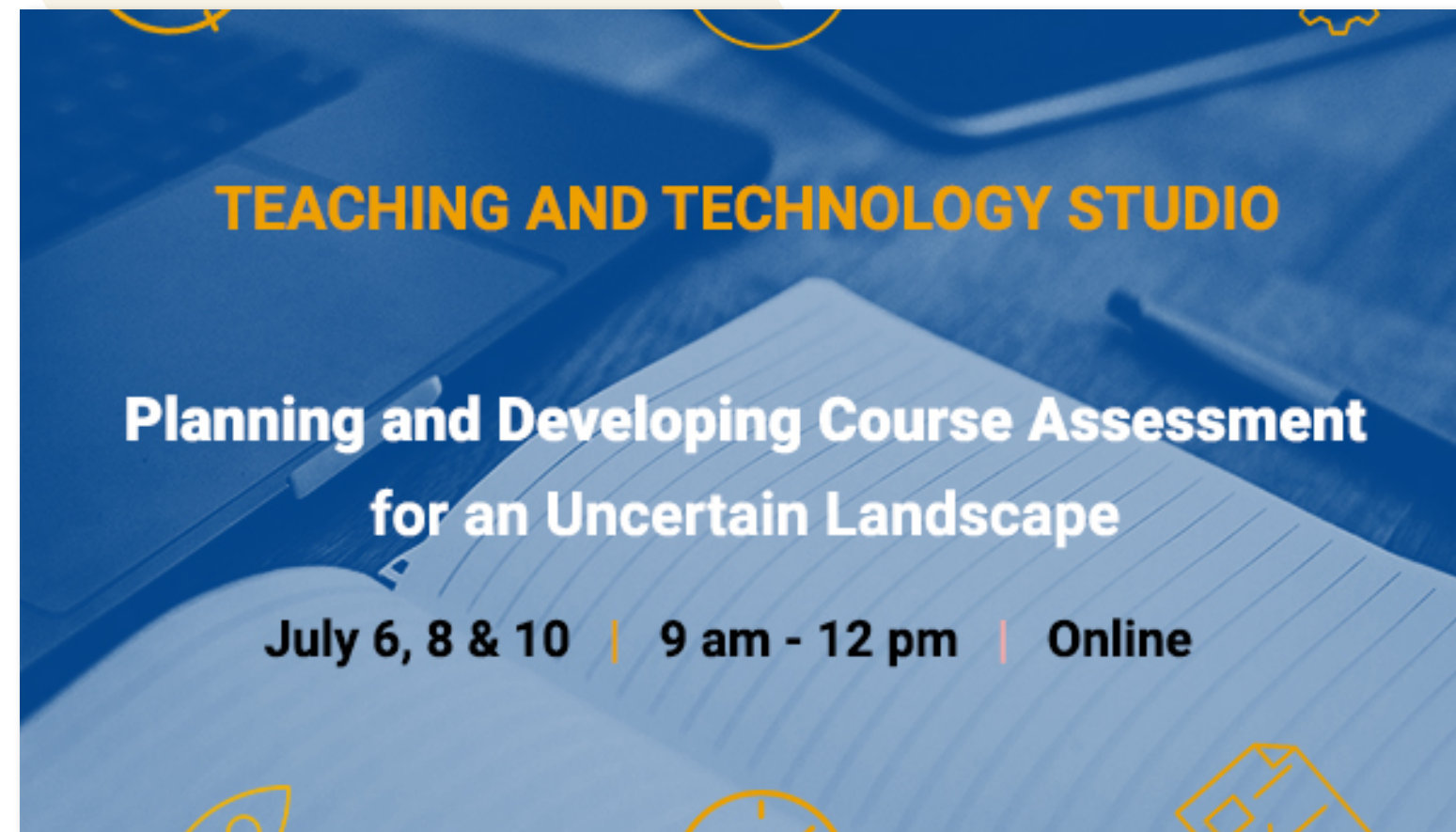
Georgia Tech faculty faced much uncertainty during the summer of 2020 since it was unknown how courses would be delivered in the fall term. In response to this situation, CTL faculty designed a teaching and technology studio focused on how instructors can design assessments that support students engaging in class in multiple ways. Participants were invited to (re)imagine assessment methods and strategies for teaching in different learning environments – remote, blended, and socially distanced in-person classes.

The studio consisted of a mix of asynchronous learning, offline individual work time, and synchronous group sessions. By the end of the studio, the participants had crafted a concrete assessment plan for a course, as well as strategies for efficient grading and providing effective feedback. The studio attracted 53 attendees from all six of Tech's colleges.

Engaging Students in Physically Distanced Active Learning

The Covid-19 pandemic changed many things about teaching, but what remains true is that students learn more effectively when they are actively engaged in the learning process. The precautions faculty must take to prevent the spread of the virus during in-person instruction mean that faculty will need to make changes to the active learning strategies that they have previously used in their courses.

In this virtual session, participants identified strategies for overcoming the challenges of active learning while physically distancing, including using classroom technology and low tech strategies for facilitating student engagement. The virtual workshop attracted 62 attendees from all six of Tech's colleges.

Working as a TA in a Remote Learning Environment
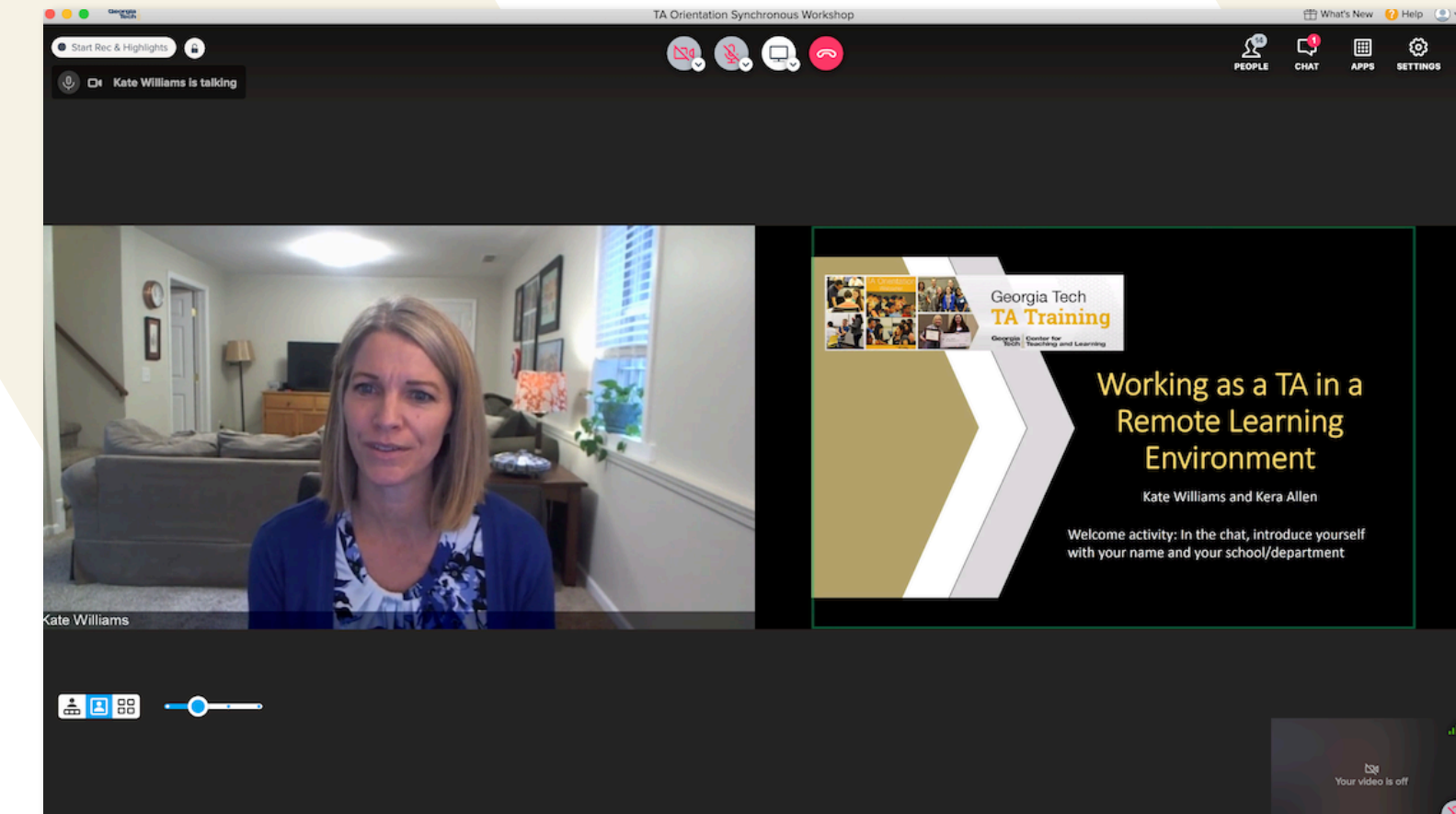
As a result of the pandemic, Georgia Tech decided to employ three learning environments during the fall 2020 term — online, hybrid, and socially distanced learning. In response to this decision, CTL faculty designed and delivered multiple workshops for teaching assistants participating in TA Orientation. These workshops offered TAs strategies for working in a remote or socially distanced learning environment.

215 undergraduate and graduate students registered for the remote learning, socially distanced, and grading workshops designed and delivered by CTL faculty during fall orientation.

Georgia Tech | Center for Teaching and Learning

CTL Online Resources
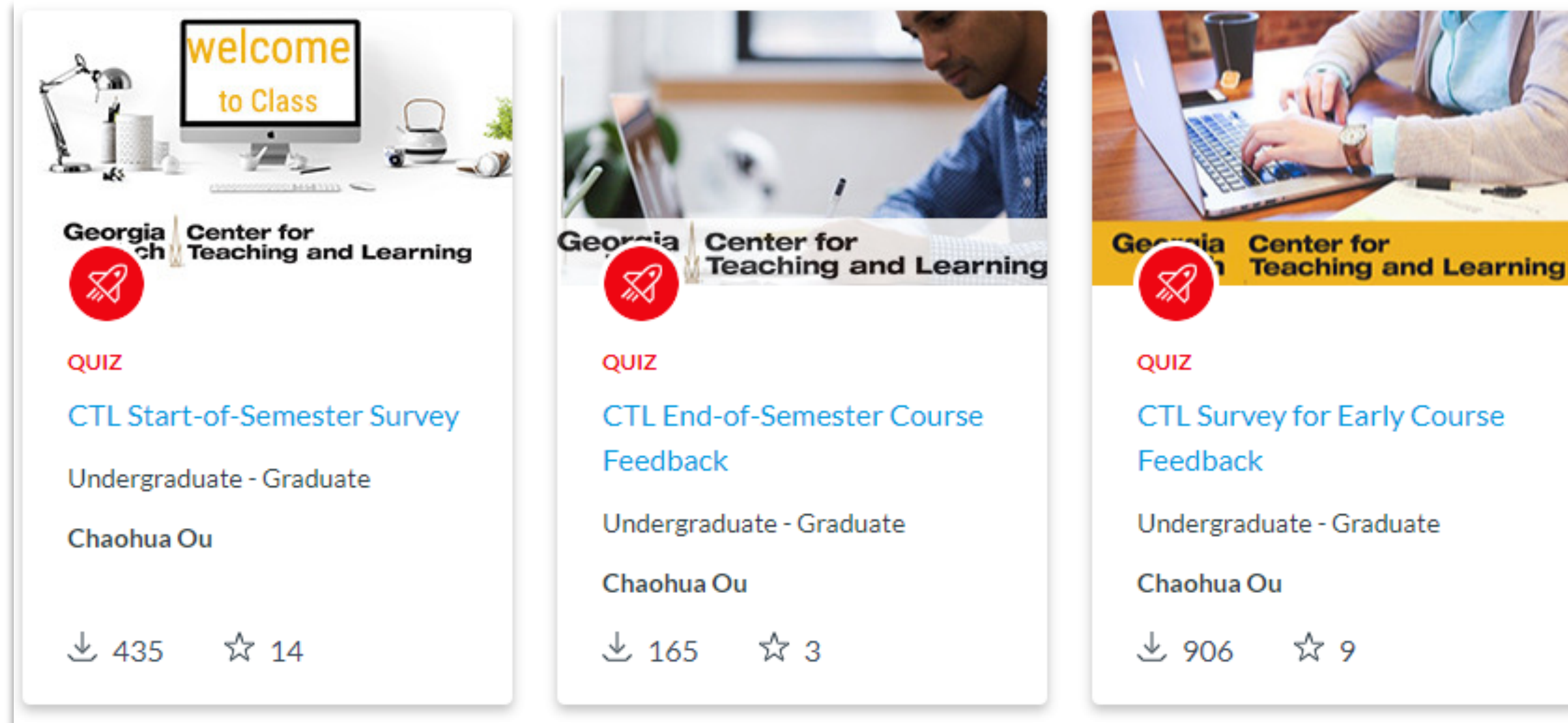
Online Resources for Remote Teaching and Learning

CTL developed four resources available for instructors to directly import into their courses in Canvas:

1. **Remote Learning Student Guide**: This learning module introduces students to the strategies, tools and resources that will help and support their remote learning

2. **Start-of-Semester Survey**: The survey is intended for instructors to use before a semester starts, or during the first week of class. It consists of an invitation to participate and 10 questions. The survey helps instructors know their students and identify their learning needs.

3. **Early Course Feedback Survey**: Instructors use this survey to collect mid-term student feedback between week 6 and week 8 of the semester . The survey consists of an invitation to participate and 4 questions. The survey provides feedback from the students on what has worked well in the course and what adjustments they would like the teacher to consider.

4. **End-of-Semester Survey**: This survey was used to gather feedback from students at the end of the Spring 2020 term, when in-person instruction was transitioned to remote teaching in the middle of the semester.

Instructors can find these resources in Canvas Commons and import them into their courses. Changes can be made to the surveys to adapt to specific instructional needs before they are delivered to students.

"I would recommend making this student guide available to all Freshmen regardless of taking classes online or in-person." —Student feedback

CTL faculty developed online resources for remote teaching and learning that were downloaded and imported into **1,653** Canvas courses.

Georgia Tech | Center for Teaching and Learning

CTL's Response to COVID-19

Remote Learning Workshops

Carol Sullivan

Faculty in CTL designed and delivered 22 one-hour virtual workshops with the goal of assisting faculty in the transition from residential to remote learning. These workshops, some in collaboration with other partners, were widely attended across multiple offerings. Topics covered in the sessions included:

• Designing the Syllabus for Remote Teaching and Learning (4x)
• Revisiting Course Expectations in the Syllabus for Fall 2020 (2x)
• Course Engagement Practices (5x)
• Effective Assessment of Student Learning (4x)
• Assessment Technologies Overview (5x)
• Administering and Grading Exams with Gradescope (2x)

Over **800** members of the Georgia Tech community attended the live sessions while many others viewed the recorded workshops at a later time.

Stepping Up: How Might Current Events Impact Our Teaching

Manu Platt

Teaching in troubling times always presents challenges. However, the summer of 2020 raised the level of challenge to new heights and generated important questions. What's the best way to connect with students when a deadly virus keeps everyone apart? How can we focus on course objectives when each day's news highlights death, systematic racism, social injustice, and civic unrest?

In an effort to address the questions above, the Center for Teaching and Learning and Serve-Learn-Sustain co-hosted two virtual conversations about the traumatic circumstances engulfing the nation and how they impact the teaching of course instructors. Over **105** Georgia Tech faculty and staff joined the two virtual meetings to listen and discuss how the tragic deaths of George Floyd, Ahmaud Arbery, Breonna Taylor, and Rayshard Brooks generated a global protest and how these events impact the campus and classroom. Conversation leaders and facilitators are pictured on the right side of the page.

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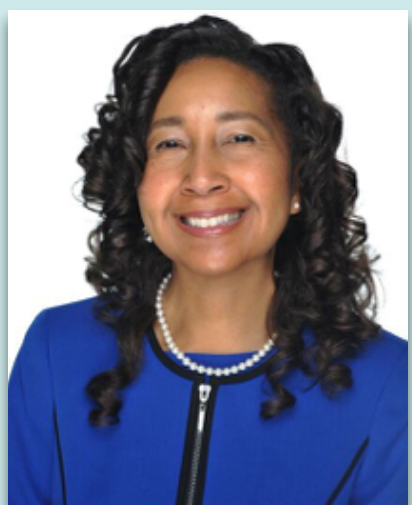Service Learning and
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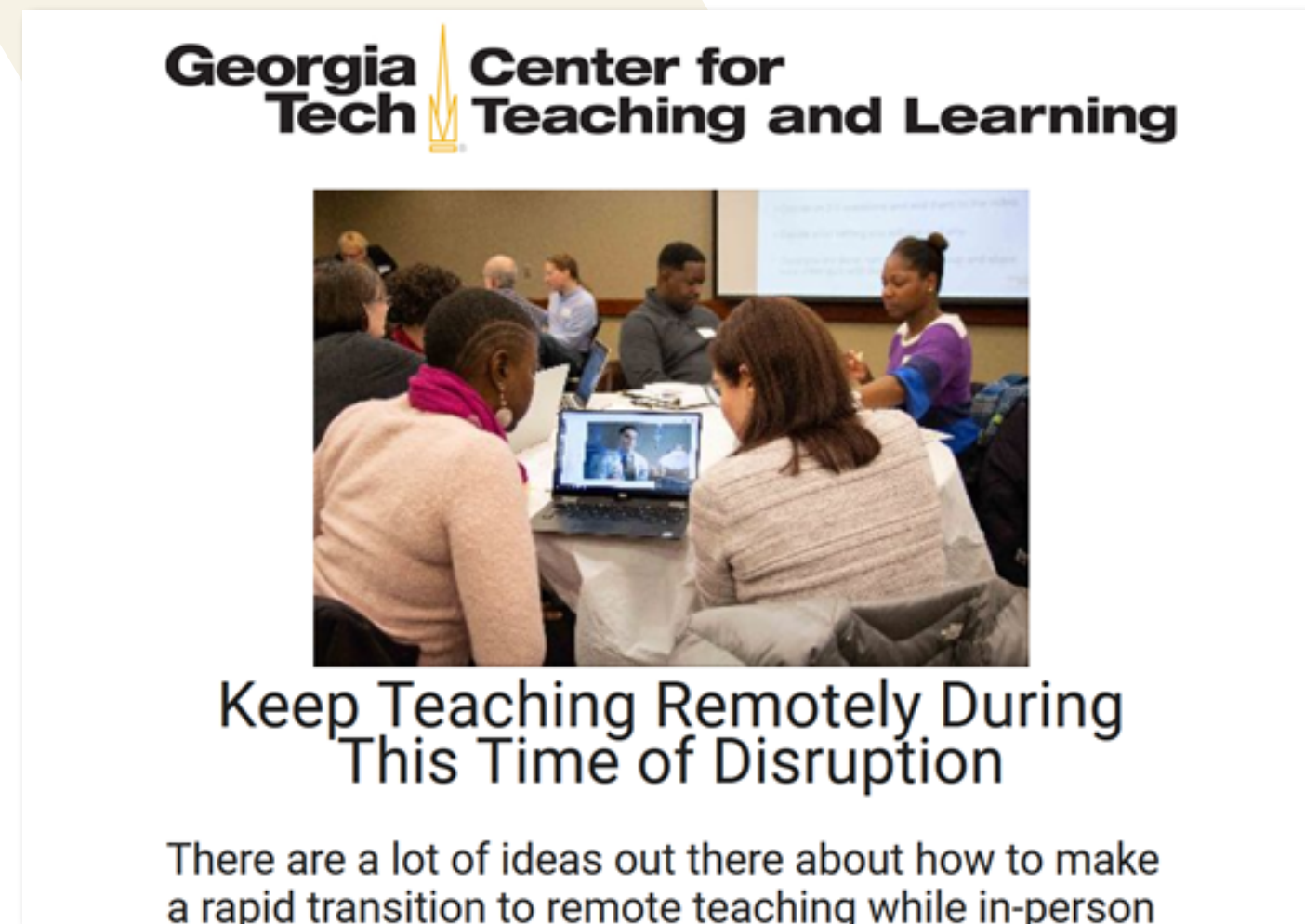Industrial and Systems
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CTL's Response to COVID-19

CTL Newsletter

CTL's newsletter became an important vehicle of communication to connect the Georgia Tech community with resources to support their remote teaching. From March 18 to June 30, 2020 CTL sent out 15 newsletters. In these messages, CTL let faculty know about upcoming workshops offered by CTL and our partners, connected faculty with blog posts and other teaching and learning resources, and generally reached out with an offer of support.

Dr. Vincent Spezzo produced additional resources on Canvas for both faculty and online teaching assistants during the transition to remote teaching and learning.

- Tips for the Remote TA
- Technology for the Remote TA
- GT version of the USG Quick Guide to Remote Teaching & Learning

USG Webinar Series — Engaging Students Online

How can you engage your students while they are learning remotely? In this upcoming, interactive session, participants will discuss how to leverage technologies to create engaging learning experiences while making it manageable for you as an instructor. Facilitators will focus on technologies and strategies you could use to support three elements of student engagement: communication, connection, and interaction. Whether you are teaching online, hybrid, or in-person classes this Fall, please join us for a discussion on engaging students and supporting their success. Come with your questions and share with your colleagues what has worked well in your teaching.

Date/Time: September 29, 2020 11 AM – 12 PM

How to be an Anti-Racist Educator

Ibram Kendi writes in *How to Be an Anti-Racist* (2019) that "there is no neutrality in the racism struggle. The opposite of 'racist' isn't 'not racist.' It is "antiracist.' …The only way to undo racism is to consistently identify and describe it—and then dismantle it." Racism is reproduced in institutions throughout our society, and higher education is not exempt. Faculty have an important role to play in dismantling racism in their own classrooms. In this virtual workshop, participants will first hear stories from students who have experienced racism at Georgia Tech. In this upcoming workshop, participants will identify concrete strategies to engage in antiracism pedagogy through their course goals, content, classroom facilitation, and assessment strategies. NOTE: Because of the sensitive nature of the conversation, this workshop will not be recorded.

Date: Thursday, September 24, 2020 | Time: 11:30am-1:00pm

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