

Teaching & Learning

Yale Center for Teaching and Learning Annual Report 2016-2017

Mission

The Yale Center for Teaching and Learning promotes equitable and engaged teaching throughout the University, and supports students across the curriculum as they take ownership of their learning. As part of a world-class research institution, we provide training, consultations, and resources designed to make teaching and learning more public and collaborative so that every Yale instructor experiences the satisfaction that results from teaching well, and every student develops the critical reflection that marks deep and independent learning.

A Message from the Deputy Provost for Teaching and Learning

As the CTL approaches our fourth anniversary, we now enjoy a central location in the heart of campus within Sterling Memorial Library. The 2016 - 2017 academic year was marked by the grand opening of the Center for Teaching and Learning on Jan. 27, 2017. Our programs and services for faculty, postdocs, graduate and professional school students, and undergraduates now take place under one roof. We are grateful for the support from University leaders and generous benefactors that enables us to foster excellence in teaching and learning campus-wide.

The CTL is guided by core principles, one of which is to make teaching at Yale a more public undertaking. Our bi-annual Faculty Bulldog Days program has now reached more than 600 unique faculty and staff members. Participants in this open classroom initiative have greater insight into teaching and learning at Yale. We also strive to showcase models of excellence from within our community. Our new Teaching Excellence at Yale email bulletin was read by hundreds of faculty members. Nineteen MOOCs on Coursera enrolled more than one million learners and helped extend Yale's educational riches around the world.

The CTL promotes a cultural change that will help realize President Salovey's goal of being the research institution most committed to teaching and learning. Our work impacts teaching and learning in all disciplines, across all schools and programs. The past academic year has included ambitious programs to effect this cultural change: a campus-wide transition of our locally supported learning management system to Canvas, the launch of a new series of workshops and forums focused on diversity and inclusion, and the launch of the Academic Strategies Program to increase accessibility to the undergraduate curriculum for students in Yale College.

Our dedicated staff provides a wealth of expertise as we tackle new challenges and enact solutions. We continue to support teaching development in the graduate student and postdoc communities by reshaping and implementing the Certificate for College Teaching Preparation, awarding Digital Education Innovation grants, and using the resources of the national CIRTLL Network, while also supporting writing development. Faculty, postdocs, and students visit the CTL for a variety of reasons. We look forward to increased cross-sectional collaborations with these populations in the years to come.

[Scott A. Strobel](#), Henry Ford II Professor of Molecular Biophysics and Biochemistry; Deputy Provost for Teaching and Learning; Vice President for West Campus Planning & Program Development

Our Executive Directors & the Center's Guiding Principles

Dr. Jennifer Frederick and Mr. Lucas Swineford serve as the executive directors of the Center for Teaching and Learning. Dr. Frederick brings to the CTL notable interdisciplinary teaching experience and a commitment to inclusive teaching practices.

Mr. Swineford has led the University's efforts to collaborate with faculty to create high-quality educational media for public dissemination and residential learning. Together, they shape the work of the CTL in alignment with our collectively developed guiding principles:

1. CTL serves teachers and learners across Yale and works with beginners to experts university-wide.
2. CTL supports learners of all backgrounds and abilities and helps develop practices that promote inclusive teaching.
3. CTL responds to teaching, writing, and learning needs and fosters innovations in pedagogy, technology, and student support.
4. CTL makes teaching and learning more public by promoting conversation and collaboration among all the stakeholders in a Yale education and by sharing select University teaching initiatives with a global audience.
5. CTL values evidence-based decisions about teaching and learning and helps faculty, departments, and programs design meaningful ways to measure impacts.
6. CTL cultivates faculty strengths and interests to advance teaching and learning.
7. The best CTL programs arise from collaboration: among CTL staff, between the CTL and the wider Yale community, between Yale and its partners around the world.

Our Impact on Campus and Beyond

600 | Faculty Consultations

134 | Faculty Workshops

2,168 | Active Course Sites Supported on Canvas

28,000 | Multimedia Files Migrated to Media Library

39 | Lecture Capture Rooms Supported Across Yale

2,068 | Grad. & Prof. School Students/ Postdocs Consultations

183 | Grad. & Prof. School Students/ Postdocs Workshops

1,046 | Graduate Students Writing Group Attendees

9 | Graduate Students Peer-Review Groups

7,787 | Undergraduate Writing Tutoring Sessions

12 | Undergraduate Learning Assistants Trained

2,417 | Undergraduate Science & QR Tutoring Sessions

52 | Undergraduate Study Halls

65 | Undergraduate Workshops

24,000 | Coursera Learners that Completed a Yale MOOC

2,784 | Videos on Yale's Lectures YouTube Channel

1,531 | Videos on Yale's Courses YouTube Channel

686 | Videos on Yale's Campus YouTube Channel

269 | Podcasts on Yale's iTunes channel

\$19,846,881 | External Funding from Grants and Benefactors since FY14

30 | Committee Service

10 | Publications (View Appendix A)

45 | Represented at National Conferences and Events

Milestones and Special Projects

New Space:

The CTL moved into renovated space in Sterling Memorial Library in January 2017. The floor-plan covers 24,000 square feet and includes a corridor connecting the newly opened York Street entrance to the nave. The center's new home also

includes a technology studio suite, several flexible classroom and meeting spaces, and one-on-one tutoring rooms. The grand opening welcomed more than 600 faculty, staff, postdocs, students, and alumni to the CTL.

Academic Strategies Program:

With the launch of the Academic Strategies Program during the fall 2016 semester, the CTL developed a series of workshops and trained peer-mentors to help undergraduates have active, empowered learning experiences. More than 300 undergraduates took advantage of workshops, such as: “How to Manage a Heavy Reading Load,” “How to Talk to Faculty,” and “Exam Study Strategies.”

I was really impressed with the time management workshop that was provided for the football freshmen...I think the work you're doing in this arena is hugely important.

- Sebastian Little, Yale College, Football Tight End

Canvas @ Yale Transition:

During the 2016-2017 academic year, the Center for Teaching and Learning supported the transition of Yale's learning management system (LMS) from Classes*v2 to Canvas @ Yale. This transition included ongoing support for approximately 4,000 courses across both platforms. To facilitate the support needed for this transition, the CTL Canvas team, pictured above, led more than 120 workshops designed for faculty, teaching fellows, registrars, librarians, and other support staff on a variety of topics from getting started to online assessment and grading. The support team hosted more than 200 one-on-one consultations and hundreds of hours of walk-in support available to anyone with a question or concern about the new LMS.

Faculty Summer Institute on Course (Re)Design:

More than 50 faculty members from 39 departments took place in the Yale Summer Institute on Course (Re)Design in May 2017 (pictured right). The three-day, workshop-intensive institute organized faculty members into nine working groups with expert facilitators. The goal of the institute was to help faculty members fully or partially redesign an existing course, or approach the design of a new course.

Led by Executive Director of the Center for Teaching and Learning Jennifer Frederick and Director of Faculty Teaching Initiatives Nancy Niemi, the institute outlined several objectives for participating faculty.

“The institute was an opportunity to connect with faculty members from across campus and to create a collaborative environment for the faculty to work with their peers and discuss their work in the classroom,” said Niemi. “The SI resulted in a great dialogue about teaching and learning at Yale.”

Faculty members continued to work with Niemi, Frederick, and other facilitators throughout the summer. The CTL continues to offer a rich set of programs and events for all faculty throughout the academic year.

The three-day intensive institute helped faculty participants achieve several objectives:

- Develop knowledge of how people learn to examine and strengthen teaching
- Identify, practice, and apply course design, alignment, assessment, and feedback strategies to strengthen connections between student-learning goals and coursework, and deep learning
- Identify how we can find out how well our students are learning
- Identify and refine components of one class that could be made more inclusive
- Discuss and explore how teaching matters in a research institution

- Discuss the culture of teaching and learning at Yale as it relates to the ways we can achieve more effective teaching for all students

Looking Forward

- Faculty Bulldog Days: Faculty may open their course or attend colleagues' courses to witness teaching across campus from April 9 - April 13, 2018.
- Spring Teaching Forum: The 20th Annual Forum, hosted by the McDougal Graduate Teaching Fellows at the CTL, will take place in March 2018.
- Enroll Today on Coursera: With 19 Massive Open, Online Courses on Coursera.org, Yale has opportunities for all learners to explore a new subject throughout the year.

Overview of Resources and Services

Working with Faculty:

- New Faculty Orientation Teaching Academy Track
- Faculty Bulldog Days (twice annually)
- Diversity and Education Series Workshops and Forums
- Teaching Consultations and Observations
- Rosenkranz Grants for Pedagogical Advancement
- Canvas @ Yale Consultations
- Canvas @ Yale Workshops on Course Site Set-up and Advanced Tools
- Coursepress Site Design and Consultations
- Teaching and Learning Lunches
- Summer Institute on Teaching
- Media Library Workshops
- Virtual Reality Course Integration
- Course Podcast/Video Recording Sessions
- Lecture Capture Consultations
- Classroom Polling Integration
- Instructional Enrichment Funds
- WR Course Instructor Resources
- Teaching with ULAs Support
- Faculty Teaching Academy Program
- Midterm Student Feedback Consultations
- Department-initiated Programs

Working with and beyond Yale:

- Yale Broadcast Studio:
 - Live Studio Broadcasts with Major News Networks
 - Audio/Video Production
- Massive Open, Online Courses Production and Dissemination
- Online Bridge Program Initiatives
- Online Degree Program Management
- National Summer Institutes on Scientific Teaching
- National Science Foundation Evaluation of the Summer Institutes
- Howard Hughes Medical Institute Yale Campus Grant to Improve Early STEM Education
- The Leona M. & Harry B. Helmsley Charitable Trust Grant to build a cohort of trained STEM instructors who collaborate with Housatonic Community College and Univ. of Bridgeport
- Classes taught in the CTL by faculty from multiple departments

- Contribute tools for batch reporting and analysis to the open source Canvas community

Working with Postdocs:

- Certificate in College Teaching Preparation
- Individual Instructional Consultations
- Fall Teaching @ Yale Day
- Spring Teaching @ Yale Day
- Fundamentals of Teaching Workshop Series
- Academic Job Search Series (with Office of Career Strategy)
- Advanced Teaching Workshops
- Spring Teaching Forum
- CIRTl Network online opportunities
- Scientific Teaching Fellows Course
- Entering Mentoring Workshop Series

Working with Graduate and Professional School Students:

- Writing Consultations
- Individual Instructional Consultations
- Fall Teaching @ Yale Day
- Spring Teaching @ Yale Day
- Peer-Review Groups for dissertation writing, research paper writing, and fellowship application writing
- Fundamentals of Teaching Workshop Series
- Academic Job Search Series (with Office of Career Strategy)
- Advanced Teaching Workshops
- Writing Workshops and Seminars Series
- Digital Education Innovation Grant Program
- Spring Teaching Forum
- Associates in Teaching (AT) Program - for GSAS Ph.D. students
- CIRTl Network opportunities
- Scientific Teaching Fellows Course
- Certificate in College Teaching Preparation
- Writing Groups: all-day Bootcamps and half-day Study Halls
- Entering Mentoring Workshop Series

Working with Undergraduates:

- Residential College Writing Tutoring
- Drop-in Tutoring with Writing Partners
- Writing Study Halls
- Weekly Writing Tutoring for International Students
- Residential College Math and Science Tutors
- Peer Tutoring for Science and Quantitative Reasoning (QR) Courses
- Additional Course-Based Tutoring by Request from Residential College Deans: Humanities, Social Sciences, Sciences, and QR
- Academic Strategies Workshops
- Academic Strategies Peer-Mentoring
- Training for Undergraduate Learning Assistants (ULAs) in Computer Science and Statistics and Data Science Courses

Working with Faculty

Consultations

The CTL staff provides consultation services to faculty throughout the year on a wide range of topics and for varied levels of engagement. Faculty often request short consultations for resources, information, and advice about specific teaching and learning topics. More thorough consultations focus on course design and instructional support, the integration of educational technologies into the classroom, and exploring digital education opportunities. The CTL staff had 600 individual consultations with faculty during the 2016-2017 academic year, including consultations for:

- Canvas @ Yale
- Inclusive Classrooms
- Assessing Student Learning
- Lecture Capture
- Media Library
- Virtual Reality Integration
- Classroom Polling Integration

Services and Resources

Media Library:

After Yale's Technology Architecture Committee commissioned a report to analyze the landscape of video-related services at Yale, the CTL was charged with creating a central repository for sharing media materials for teaching and learning. During the 2016-2017 academic year, the CTL led the effort to migrate content from Echo 360 and Kaltura to Panopto (a cloud-based media-management platform) - now branded on-campus as Media Library. The staff worked with faculty members and administrators to migrate/upload 28,000 files with 15,000 legacy files and 13,000 new files. Staff also hosted more than 20 workshops about the Media Library platform and its best practices for faculty.

Faculty Teaching Initiatives Digital Resources:

The CTL launched a collection of digital resources about teaching. The pages were posted to the CTL website at the end of the academic year. Staff and fellows extensively researched teaching topics and strategies to create the 88 pages. By September 2017, the pages received 28,601 views. Topics include:

- Course Planning
- Managing the Classroom
- Strategies for Teaching
- Instructional Tools
- How Students Learn
- Diversity and Inclusion

Canvas @ Yale Services and Resources:

In addition to supporting the transition from Classes*v2 to Canvas @ Yale, the CTL's Canvas team migrated teaching materials from more than 18,000 courses during the summer of 2017 and developed an archive tool for faculty to successfully archive their course(s) from Classes*v2 as a resource for their teaching.

The CTL partnered with Yale ITS to develop a new course email list tool, an anonymous feedback tool for students to share comments securely back to an instructor, and the *Post'Em* tool for custom feedback delivery and grade distribution.

CoursePress:

Yale CoursePress is a WordPress platform for students and faculty who need a flexible, online platform to help them with their academic work. More than 100 courses per year use the platform to enable collaboration, communication, and publication of digital content.

CoursePress Consult:

The CTL worked with Bill Goettler, associate dean for Assessment and Ministerial Studies at Yale's Divinity School, to support the use of ePortfolios and Canvas by blending the functionality of Canvas with the flexibility and versatility of a Wordpress-based ePortfolio. As a result, students received an ePortfolio with a standardized template and Dr. Goettler was able to leverage Canvas for its communication tools, prompting students to work on their portfolio as the semester progressed.

Teaching Excellence at Yale:

Teaching Excellence at Yale, a twice monthly communication distributed to all faculty during the academic year, launched in February 2017. Each newsletter highlights a teaching practice of an individual faculty member from various departments and schools, as well as supporting research and resources available to faculty through the Center for Teaching and Learning. In the first semester of the newsletter, six editions were sent to an audience that grew to 5,463 by May 2017. The average open rate for the first six editions was 50 percent. The first six faculty members featured were:

1. Steven Smith, The Art of Lecturing, Political Science
2. Helen Caines, Using Small Groups in Large Classes, Physics
3. Angela Lee-Smith, Using Audio Portfolios to Assess Progress, Korean
4. Patrice O'Neill-Wilhelm & Sharen McKay, Co-Teaching in a Clinical Setting, Nursing/Medicine
5. Hedy Kober, Difficult Topics in the Classroom, Psychology/ Psychiatry/Law
6. Michael Koelle, Critical Reading of Scientific Literature, MB&B

Teaching Excellence at Yale (Example):

Patrice O'Neill-Wilhelm, a full-time lecturer at the School of Nursing, and Sharen McKay, a bench scientist and research lab manager at the School of Medicine, team teach a biomedical course for the Graduate Entry Prespecialty in Nursing (GEPN) program. McKay, the primary instructor, delivers a comprehensive overview of the biologic sciences while O'Neill-Wilhelm provides clinical examples that illustrate the relevance of the science in specific medical conditions.

This teaching partnership began as a suggestion from the director of the GEPN program and has evolved organically to become a unique course. Not surprisingly, one of the challenges - for professors and students - is the pace. "Because I'm a researcher and not a clinician," states McKay, "Patrice has been essential in keeping the material clinically relevant." O'Neill-Wilhelm adds, "Biomed is a science course. Students have to understand chemistry and cell biology before they have a picture of what's going on in the body. By giving them a corresponding clinical picture, it gives them a better idea of how that science works."

Co-teaching requires a high degree of coordination, sophisticated planning, and a willingness to attend and participate in each other's classes. Having experts work together to provide appropriate and relevant clinical correlations to facilitate students' science comprehension should lead to better learning, and ultimately, of course, better patient care. When O'Neill-Wilhelm explains something at the applied level - for example, how abnormal chemical reactions in the body alter normal metabolic processes, resulting in diseases such as obesity or Type II diabetes - students seem to soak it up. She continues, "It's like you can see them saying to themselves, 'That's why I'm here, that's why I am in this program.'"

Read the full version via: ctl.yale.edu/TeachingExcellence

Programs

New Faculty Orientation:

In collaboration with the Office of the Provost, the CTL facilitated the Faculty Teaching Academy track during New Faculty Orientation from August 24 – 25, 2016. More than 60 faculty members attended the teaching academy. Scott Strobel, deputy provost for teaching and learning, and Jennifer Frederick, executive director of the CTL, welcomed the new faculty and the Faculty Teaching Initiatives staff organized sessions focused on the teaching and learning culture at Yale, inclusive classrooms, and grading in Yale College. Participants also heard from students during a lunch panel about their perspective on the teaching culture and what they want new faculty to know about student life. In addition, new faculty were encouraged to participate in programming throughout the year, including:

- Diversity and Education Series Forums
- Teaching and Learning Lunches
- Canvas @ Yale Workshops
- Yale Summer Institute on Course (Re)Design

I really appreciate all of the resources and support you've offered through the CTL over the past year. It was invaluable going into my first year of teaching, and I'm looking forward to ongoing work together and learning more.

- Dylan Gee, assistant professor, Psychology

Faculty Bulldog Days:

The deputy provost for teaching and learning, Scott Strobel, invites faculty at Yale to take part in Faculty Bulldog Days during the fall and spring semesters each year. Faculty choose to open their classrooms to their peers in the spirit of making teaching more public. This presents an opportunity to observe the wealth of deep knowledge addressed in Yale's classrooms every day and to become more engaged in Yale's community of scholars. The Faculty Bulldog Days program has reached 680 unique people on campus since its inception in April 2015. Feedback from 2017 indicated that 88 percent of people were moderately or extremely satisfied with their overall Faculty Bulldog Days experience.

"I just wanted to let you know how much I enjoyed my experience with Faculty Bulldog Days. The two classes I attended were very interesting; it was a treat to learn and think about things outside of my usual work."

- Leslie Sude M.D., assistant clinical professor, School of Medicine

Diversity and Education Series:

As partners, the Office of the Provost and the Center for Teaching and Learning launched the Diversity & Education Series. The first five workshops, forums, and events focused on inclusive pedagogy in action. Each session included a guest or group from another university or college to translate commitments to inclusive practice into accomplishments throughout the work of the organization.

Guests included:

- Dr. Frank Tuitt | Provost of Diversity & Inclusion, Senior Advisor to the Chancellor at Univ. of Denver
- Dr. Kimberley Tanner | Prof. of Biology Education and Dir. of SEPAL at SFSU
- Dr. Elsa Núñez | Pres. of ECSU
- Story Collider
- University of Michigan CRLT Players

“I believe that together we can actualize our inclusive excellence aspirations to create inclusive campus environments that respect and care for the souls of our students.”
 - Frank Tuitt, Ph.D., from “Making Excellence Inclusive in Challenging Times”

Teaching and Learning Lunches:

The Teaching and Learning Lunch Series invites faculty from across disciplines to host a discussion at the CTL on a topic of their choosing. The Faculty Teaching Initiatives Team at the CTL organizes the schedule and partners with the speakers to prepare the lunch event; the CTL hosted 13 lunches on a variety of topics:

- Claudia De Grandi: *Pedagogical strategies to increase students’ motivation and engagement* (April 2017)
- Jennifer Hirsch: *Student research projects in introductory courses: lessons learned in psychology* (April 2017)
- Adriane Steinacker: *Teaching physics to a broad audience of students* (April 2017)
- Crystal Feimster: *The practice of critical pedagogy* (March 2017)
- Hedy Kober: *Touching on hot topics on a hot campus* (February 2017)
- Joe Chang: *Online discussion forums for students – and for faculty* (February 2017)
- Jessi Cisewski: *Eliciting student participation in traditionally non-interactive lectures* (December 2016)
- Michael Faison: *Immersive, interactive exercises for teaching science (not just astronomy!) in a digital dome theater* (November 2016)
- Kathryn Lofton: *Teaching in the time of course evaluations and the consumer culture of education* (November 2016)
- Michael Koelle: *How to run an effective large-enrollment lecture course* (October 2016)
- Sophia Rosenfeld: *Asking questions in lectures and discussion-based seminars* (October 2016)
- Jing Tsu: *Area studies vs. method: teaching China* (September 2016)
- Jonathan Reuning-Scherer: *To flip, or not to flip: running simultaneous flipped and traditional classrooms in introduction to statistics* (September 2016)

Partnerships

Rosenkranz Grants for Pedagogical Advancement:

The CTL awarded nine Rosenkranz Grants for Pedagogical Advancement to faculty who were interested in designing and developing new digital course materials or experimenting with new teaching models and technologies. The School of Medicine and the CTL partnered to select three of the eight grants whose primary focus was on medical education.

These projects are sponsored by a gift designated for educational advances that draw on instructional technology. Selection criteria for these awards include the effectiveness of the project in positively affecting instruction at Yale and the impact on student learning.

A project’s scope might include implementing technology in a way that experimentally revises some part of a course or aims to enhance student learning by redesigning a course to integrate an appropriate digital tool.

The CTL partners with each grant recipient as the year-long project progresses; each grant recipient is awarded up to \$10,000 to complete their project. This year's grant recipients included:

- Erik Harms, Department of Anthropology, "Southeast Asian Neighborhoods 360: Integrating Virtual Reality Experiences into the Urban Anthropology Classroom"
- Monica Bravo, Department of the History of Art and Program in Ethnicity, Race, and Migration, "Visual Culture of the National Parks"
- Kaveh Khoshnood, Stefan Uddenberg, Dumingo Aparna Gomes; School of Public Health and Department of Psychology, "Using Interactive Life Simulations to Train Public Health Students to Respond to Violent Conflicts and Complex Humanitarian Emergencies"
- Sara Schaefer, Jeremy Moeller; School of Medicine, Department of Neurology, "Interactive Video-Based Patient Encounter Simulations in Movement Disorders"
- Sarita Soares, Bryan Brown; School of Medicine, Internal Medicine–Primary Care Residency Program, "Sugar-Coated Science: Animating and Anthropomorphizing Drugs, Molecules and Cells to Enhance Medical Trainee Diabetes Education"
- Stephen Stearns, Larry Bowman, Madelon Case, Eric Erkenbrack, Nikunj Goel, Daniel MacGuigan, Evlyn Pless, Maud Quinzin, Nathan Upham, Anna Vinton; Department of Ecology and Evolutionary Biology, "Training 21st Century Educators to Explain Science to the World"
- Nicholas Ryan, Edward Vytlačil, Department of Economics, "Introduction to the Economic Analysis of Data" (a course re-design for the Econometrics sequence)
- Ellice Wong, Christopher Tormey, Alexa Siddon; School of Medicine, Internal Medicine (Hematology/Oncology), Laboratory Medicine, and Pathology, "A Multi-Disciplinary, Interactive, Digital Peripheral Smear Course for Medical Students and Beyond"

Active Learning in the CTL Studio: Writing for Audio:

Have you ever wondered how Megan Chakrabarti, Jacob Goldstein, or Ira Glass develop the stories that they tell on National Public Radio? Do they step up to the microphone and just start talking or have they taken the time to write and rehearse what they will say?

According to Mark Oppenheimer, lecturer in English, Divinity, and Political Science and director of the Yale Journalism Initiative, "The podcast has become the medium for the most innovative radio nonfiction—indeed, for the best creative nonfiction today, radio or otherwise."

Oppenheimer recently taught an inventive writing course during the spring term, ENGL 471: Writing for the Ear, Advanced Podcasting Workshop. His syllabus stated:

Using audio resources available at Yale...we will learn basic techniques for audio production: recording, cutting audio, sound design. Students will be expected to select a topic for the final project by the second week and begin reporting and collecting 'tape' ... by the third week.

The course was a study of the radio/podcast medium and a collaborative endeavor for students as they worked with Oppenheimer and staff from the CTL to produce a series of podcasts about undergraduate life at Yale.

"When I decided to teach Yale's first-ever course in podcast production, one of my great worries was where the students would get studio time," said Oppenheimer. "The CTL Studio solved that, with new, excellent equipment, and a wonderfully supportive staff. The students couldn't have turned out such terrific work without the Studio."

Students visited the CTL Studio Suite to record and cut audio after editing their scripts. In total, 15 students used the resources in rooms 116E and 118A for an approximate total of 75 hours.

“Working with Mark allowed us to demonstrate how the CTL can help support faculty members with creative class assignments that require a studio space,” said John Harford, manager of the CTL Studio and director of digital education.

“We have the resources to help faculty at Yale implement active learning assignments and we welcome the opportunity to work with more faculty interested in using audio or visual equipment with their students.”

Pictured above: Sanjana Singh, CTL staff member, testing audio in the Studio Suite.

Active Learning in the CTL Studio: Virtual Reality:

The CTL worked with Kathryn Slanski, a lecturer in both Near Eastern languages and civilizations and in humanities, and Agnete Lassen, associate curator of the Babylonian Collection at Sterling Memorial Library, on a course assignment for “The Hero in the Ancient Near East.”

The assignment transported students to the ancient city of Nimrud, about 19 miles south of Mosul. Students experienced a virtual model of the Northwest Palace at Nimrud using an Oculus Rift, a virtual reality (VR) system in the CTL’s Studio Suite.

“The study of the ancient Near East has for a long time been very detached from the remains that are still in place in Iraq,” said Lassen, who explained that conflicts in the region have resulted in the detachment.

After research and outreach, Lassen, Slanski, and the CTL were able to partner with Learning Sites, a company that focuses on modeling archaeological sites using evidence to create accurate and detailed virtual reality experiences for higher education research and coursework.

Slanski’s course explores multiple themes including the power dynamics of kings and their portrayal of power via structures designed to impress friends and enemies. Learning Sites had already designed and built a VR model of the Northwest Palace at Nimrud, a prime example of a king’s portrayal of power, when Yale contacted the company.

Students used the VR system in April 2017 to visit the palace, after several weeks of course instruction and interaction with other historical objects in Yale’s collections at the Library and University Art Gallery.

“I think the fact that they were literally stepping into, or virtually stepping into, a different space let them be a little freer with their imaginations,” Slanski said. “Students wrote that they could practically smell the smoke from the fire and the incense from the braziers, and one wrote that looking at the ceiling was like looking at the sky.”

“Virtual reality can give you this understanding of space, of architectural setting ... that was a new way for students to interact with these ancient objects,” said Lassen.

“The aim is to have a better teaching and learning experience at Yale,” said Sanjana Singh, associate director of digital education at the CTL. “It is not about the technology. It is all about how we use that technology to impact education.”

“When you work with little objects, like a note written 4000 years ago, you get that sense of deep connection. You do not get that sense with the VR,” Lassen cautioned.

“But what the VR does in combination with the real art is set it into its architectural context,” Slanski explained. “To complement the close encounter with the works of art, I think, was really effective for the students and really powerful.”

Working with Postdocs

Postdoc Resources and Programs

The Center for Teaching and Learning believes all instructors should experience the satisfaction that results from teaching well and all learners should develop the critical reflection that marks deep learning. The CTL welcomes postdoctoral fellows and associates to its many programs and services. Though some of these programs and services were originally designed for faculty or Ph.D. candidates, the CTL has increased access for postdocs.

In addition to programs outlined in “Working with Faculty” and “Working with Graduate & Professional School Students,” the CTL is home to several national STEM education initiatives that work with postdocs at Yale to increase student persistence in science, technology, engineering, and math fields by employing evidence-based teaching strategies in introductory courses.

The CTL has also partnered with the Office for Postdoctoral Affairs and the Yale Postdoctoral Association to offer tailored resources and consultations to postdocs in various departments and across multiple disciplines. With more than 2,000 postdocs at Yale, the CTL wants to create an inclusive environment for teaching and learning.

Postdocs are encouraged to review the CTL’s website for resources applicable to their work at Yale and to inquire about any teaching or learning resources that might improve their experience on-campus. The following page highlights several popular resources for postdocs. More information about these programs can be found in the following sections of this report:

- Working with Faculty
- Working with Graduate and Professional School Students

Certificate of College Teaching Preparation (CCTP):

The Certificate of College Teaching Preparation (CCTP) is an opportunity for postdocs to complete a comprehensive training program in effective college teaching. The certificate is not a summative evaluation of participants’ teaching; rather, it provides a record of participation in teaching activities and generates reflections on those experiences.

The CCTP requires a combination of teaching at Yale, classroom observation, participating in pedagogy workshops, joining learning communities (including the CIRT network), reflecting on one’s pedagogy, and developing a teaching portfolio. The Postdoc version of the CCTP is based on a certificate originally designed for graduate students. The CTL believes that those who complete the certificate program will be better able to teach undergraduates at Yale and beyond.

Participants should also be more attractive candidates for colleges and universities that are recruiting skillful teachers. Twenty-seven graduate students and postdocs completed the CCTP by May 2017.

Scientific Teaching Course:

The goal of the Scientific Teaching Course is to improve undergraduate STEM education by training a new generation of scientific teachers to bring the spirit and rigor of research into the classroom. The course is offered both semesters to postdocs interested in teaching.

The fall 2016 course, PHYS 530: Theory and Practice of Scientific Teaching for Physical Scientists, was taught by Rona Ramos and Kaury Kucera. The spring 2017 course, B&BS 879: Theory and Practice of Scientific Teaching for Life Scientists, was taught by Elizabeth Luoma and Tracie Addy. The course hopes to introduce postdocs to active learning, inclusive teaching, and effective assessment strategies.

Writing Workshops at the GWL:

In 2016-2017, the Graduate Writing Lab at the CTL hosted a variety of workshops, seminars, and discussion panels on topics related to academic writing and communication, which are designed to assist the participants in learning and mastering writing and communication techniques.

These programs were offered on a weekly basis and were taught by Graduate Writing Fellows and Consultants and CTL staff. During the 2016 - 2017 academic year, the GWL at the CTL offered 85 sessions with a total of 217 postdoc participants (in addition to 1,172 graduate student participants).

Multi-Series Teaching Workshops:

In 2016-2017, the CTL partnered with the Office of Career Strategy and Yale Postdoctoral Affairs to host a series of workshops and panel discussions designed to help postdocs interested in an academic career, developing teaching skills, and understanding the fundamentals of teaching. Workshops included:

- Controversies of contemporary pedagogy
- Inclusive teaching
- Teaching across the sciences
- How to lead discussions
- How to design assignments
- How to lesson plan
- Creating the ePortfolio: explaining the purpose of academic ePortfolios

Working with Graduate and Professional School Students

Consultations

To serve Yale's population of graduate and professional school students, the CTL employs staff, graduate student fellows, and graduate student consultants to provide consultation services throughout the year for writing and teaching topics.

Individual writing consultations, offered by the Graduate Writing Lab at the CTL, are face-to-face sessions, during which students meet with graduate writing consultants and discuss their work including research papers, prospectuses, dissertation chapters, grant and fellowship applications, conference presentations, and other written and oral materials. The CTL served 395 graduate and professional school students with 1,959 writing consultations during the 2016-2017 academic year.

Individual teaching consultations include observations and one-on-one counseling about course design, writing the teaching statement, and coaching on job talks. The classroom observation cycle, which includes a pre-meeting, a visit to the class, and a post-meeting to debrief about the class, stands as one of the most powerful tools for helping new teachers improve their craft. The CTL served graduate students and postdocs with 105 teaching consultations during the 2016-2017 academic year.

"The consultant gave me not only amazing suggestions for improving my chapter, but also suggested some on-line resources I can use as a non-native speaker of English."
- Anonymous Post-Writing Consultation Feedback from a Graduate Student

Writing Programs and Resources

The Graduate Writing Lab (GWL) at the CTL offers a wide variety of programs and resources for graduate students and professional school students. As part of the CTL strategic plan, the GWL continued actively expanding its programs and resources to six professional schools, including Forestry and Environmental Studies, Public Health, Divinity, Drama, Art, and Music.

The GWL also made its consultation services available to other schools if students or departments reached out with requests. This second year of expansion has yielded participation from all schools in workshops and from several in writing groups, as outlined in the table (on the next page).

Table: Graduate Writing Lab Program Attendance

Total Attendance by Program & by Affiliation	Individual Consultations	Workshops	Writing Groups	Peer-Review Groups	Total
GSAS Students	1,403	932	935	327	3,597
Ph.D. Students	1,191	812	863	312	3,178
Master's Students	94	29	7	0	130
Non-degree Students /Scholars	118	91	62	15	286
Professional School Students	556	240	82	0	878
Forestry	126	55	16	0	197
Public Health	72	53	20	0	145
Drama	24	4	15	0	43
Art	20	2	0	0	22
Music	26	3	3	0	32
Divinity	91	36	12	0	139
P.A. Program	41	0	0	0	41
Law	109	9	14	0	132
Medicine	15	19	2	0	36
Architecture	16	8	0	0	24
Management	13	18	0	0	31
Nursing	3	33	0	0	36
Yale College Students	1	30	2	0	33
Postdoctoral Scholars	4	217	5	0	226
Visiting Scholars	0	90	15	0	105
Faculty and Staff	9	45	7	0	61
Grand Total	1,973	1,554	1,046	327	4,900

Workshops:

The GWL at the CTL hosts a variety of workshops, seminars, discussion panels, and information sessions on topics related to academic writing and communication, which are designed to assist the participants in learning and mastering writing and communication techniques.

These programs are offered on a weekly basis and are taught by McDougal Graduate Writing Fellows, and CTL staff. Writing workshops and other group sessions explore academic writing, graduate student requirements, grant writing, writing for publications, oral communication strategies, and advanced writing topics.

During the 2016 - 2017 academic year, the GWL at the CTL offered 85 sessions with a total number of 1,554 participants. Sessions included:

- Principles of Scientific Writing
- Choosing a Dissertation Topic in the Humanities
- Concept Mapping in Academic Writing
- How to Write a Winning Fellowship in the Sciences
- Turning Your Dissertation into a Book
- Designing Effective Slides for Your Next Presentation
- Fighting Impostor Syndrome for Disserting Students

“The presenter was incredibly personable and very engaging. The intro slides about Jodie Foster and Meryl Streep were clever and especially memorable. In general, it was wonderful to have this topic discussed matter-of-factly, as something that’s common. It demystified Impostor Syndrome.”
- Anonymous Post-Workshop Feedback from a Graduate Student

Writing Group Programs:

Dissertation Boot Camps and Study Halls are writing group programs that provide space and the right environment for the participants to focus on their dissertation or research project writing, supporting writers through the isolating periods of dissertation writing.

These programs are organized and facilitated by 12 McDougal Graduate Writing Fellows under the supervision of the CTL staff.

During these programs, the GWL at the CTL models a productive writing day or session where participants create writing goals, communicate them to their peers, have food, snacks, and drinks, and occasionally receive consultations.

During 2016 - 2017, the GWL at the CTL offered eight days of the Dissertation Boot Camps with 390 total attendees (181 individual participants) and 20 three-hour Writing Study Halls with 656 total attendees (186 individual participants).

Dissertation Boot Camps and Study Halls engaged more participants in 2016 -2017 due to the new space of the CTL and additional Study Halls in June. As a result, the total number of individual students attending these programs increased by 27.5% compared to 2015-2016.

*“The stretching plus meditation sessions were amazing, thank you for adding those!
These sessions are some of my favorite days at Yale!”*
- Anonymous Feedback from a Graduate Student

Peer-Review Group

Peer-Review Groups provide a safe, low-stress environment to try out new ideas, share written work in progress, and receive feedback at any stage of writing for graduate students. These are small groups where participants workshop their drafts during weekly meetings. The duration of the group is set by project time-lines.

The groups are facilitated by GWL Consultants who organize the meetings, circulate drafts, and lead discussion sessions. In 2016 - 2017, the GWL offered nine peer-review groups, which included four dissertation writing groups, two NSF writing groups, one NIH grant writing group, and two research paper writing groups.

Grant writing groups (NSF and NIH Fellowship Applications) met five to six times, while dissertation writing groups and research paper writing groups met between eight to 14 times. This resulted in 327 attendances by 46 participants.

"I liked the accountability towards each other to provide writing regularly, as well as the opportunity to present to colleagues outside the discipline." - Anonymous Feedback from a Graduate Student

Teaching Programs and Resources

In 2014, the CTL expanded the scope and mission of the former Graduate Teaching Center. As a result, all graduate students and professional school students have access to programming that aims to improve the learning experience for Yale undergraduates, while also offering professional development to future faculty that will serve them well in their job search and a variety of careers. In addition to the work of CTL staff members, the center employs a team of 20 McDougal Graduate Teaching Fellows, who are graduate students from a range of departments and disciplines at Yale. These fellows gain valuable professional development in pedagogy training and peer mentoring, while giving back to their departments and the broader university community.

"[CTL classrooms and meeting areas] are built to be highly modular, allowing for the kind of collaboration and peer discussion we deem central to both cognitive process and in establishing community."

- Hannah Lant, GRD '21, a McDougal Graduate Teaching Fellow

Teaching @ Yale Days:

The CTL offers several large-group events each year to promote excellence in teaching, including Teaching @ Yale Days during the fall and spring semesters. These half-day events took place in August 2016 and January 2017 for graduate students who are new to teaching at Yale. The program helps students get oriented to teaching by offering guidance about working with undergraduates, engaging learners, developing good relationships with faculty mentors, creating an inclusive classroom, and understanding academic integrity. The August event served 300 graduate students, and the January event served an additional 150 graduate students. GSAS now requires participation in this event for all graduate students who are teaching for the first time. Learning outcomes include:

- Become better prepared for the first day of section, class, or lab
- Learn about important policies and guidelines for teaching in Yale College
- Gain insight into student and faculty perspectives on graduate teaching and the role of the Teaching Fellow
- Be introduced to many teaching resources available at the Center for Teaching and Learning

Digital Education Innovation Grants:

The CTL awards up to 10 \$500 grants each year to support the creation of new and innovative educational opportunities using digital and/or online platforms. The funds are designed to impact student and user learning via the creation of apps, simulations, active learning exercises, and digital resources. To guide awardees, the CTL provides development support to the recipients for the first four weeks of projects.

Spring Teaching Forum:

The CTL hosted the 19th annual Spring Teaching Forum in May 2017 on “Civic Concern in Teaching and Learning: What is the public mission of a university education?” The day-long event was organized by CTL McDougal Graduate Teaching Fellows. It drew participants from across the University, including faculty and graduate students to discuss how to extend teaching beyond the walls of the classroom.

Joe Bandy, assistant director of the Vanderbilt University Center for Teaching, served as the keynote speaker.

The forum’s learning outcomes included:

- Describe the nature and aims of civic pedagogy, as well as its consequences
- Use strategies to promote civic engagement in learning environments
- Extend civic learning beyond the classroom to institutions and communities

The CTL offered 98 workshops for graduate students, professional school students, and postdocs. Of the workshops, 67 were part of a multi-part series.

Academic Job Search Workshop Series:

In 2016-2017, the CTL partnered with the Office of Career Strategy and Yale Postdoctoral Affairs to host a series of workshops and panel discussions designed to help Ph.D. candidates and postdocs interested in an academic career.

Topics included:

- Creating an ePortfolio: This workshop explained the purpose of academic ePortfolios and looked at polished examples.
- Teaching Statements: This workshop examined the process of composing and editing a teaching statement.

Fundamentals of Teaching Workshop Series:

Fundamentals of Teaching workshops are offered as a four-part series. The workshops introduce the theory and practice of teaching in an interactive setting and adapt topically to promote deep and discipline-specific conversations. Graduate students, professional school students, and postdocs are invited to attend. Topics included:

- Controversies of Contemporary Pedagogy
- Inclusive Teaching
- Teaching Across the Sciences
- Teaching in the Humanities

Advanced Teaching Workshop Series:

Advanced Teaching Workshops are held throughout the year to help postdoctoral and graduate teaching fellows gain the skills they need to make the transition to faculty positions and teaching their own courses. Participants in these workshops learn advanced skills, including:

- How to lead discussions
- How to design assignments
- How to plan lessons
- How to lecture effectively
- How to provide feedback and grade

The CTL offered more than 40 workshops as part of the ATW series in 2016 - 2017.

Certificate of College Teaching Preparation (CCTP):

The Certificate of College Teaching Preparation (CCTP) is an opportunity for graduate students, professional school students, and postdocs to complete a comprehensive training program in effective college teaching. Participants are responsible for keeping track of their participation in programs.

The certificate is not a summative evaluation of participants' teaching; rather, it provides a record of participation in teaching activities and generates reflections on those experiences. Participants use the CCTP guidelines to organize and receive recognition on their transcripts for their efforts to become effective classroom teachers. The CCTP requires a combination of teaching at Yale, classroom observation and being observed, participating in pedagogy workshops, joining learning communities, reflecting on one's pedagogy, and developing a teaching portfolio.

The CTL believes that those who complete the certificate program will be better able to teach undergraduates at Yale and beyond. Participants should also be more attractive candidates for colleges and universities that are recruiting skillful teachers. In 2016-2017, 27 graduate students and postdocs completed the CCTP by May 2017.

Associates in Teaching Program:

The Associates in Teaching Program, offered in partnership with the GSAS, allows advanced Ph.D. students to expand their range of teaching experiences and responsibilities. Initiated in 2009, this program requires that doctoral students conceptualize or redesign, plan, and deliver an undergraduate course with mentorship, and in partnership, with a Yale faculty member. In 2016-2017, 19 applications were considered and 10 were selected.

The CIRTL Network:

In 2016, Yale joined the national Center for the Integration of Research, Teaching and Learning (CIRTL) Network comprised of 42 research institutions across the United States. CIRTL Network programs are broadly designed to improve future STEM faculty teaching and mentoring. Yale graduate students, professional school students, and postdocs who earn the CCTP also earn the "CIRTL Associate" title. In collaboration with Dr. Paula Kavathas, the CTL manages the relationships with the CIRTL Network and champions the use of resources on campus.

Scientific Teaching Course:

The goal of the Scientific Teaching Course is to improve undergraduate STEM education by training a new generation of scientific teachers to bring the spirit and rigor of research into the classroom. The course is offered every semester to graduate students and postdocs interested in teaching. The fall 2016 course, PHYS 530: Theory and Practice of Scientific Teaching for Physical Scientists, was taught by Rona Ramos and Kaury Kucera. The spring 2017 course, B&BS 879: Theory and Practice of Scientific Teaching for Life Scientists, was taught by Elizabeth Luoma and Tracie Addy.

"The CTL has benefited from having its own space on campus because we can now showcase teaching in modern classrooms, we can host numerous workshops and seminars, and we can collaborate as a center to meet the needs of faculty, postdocs, graduate and professional school students, and undergraduates."

- Jennifer Frederick, Ph.D., executive director of the CTL

Teaching Future Faculty How to Teach:

With the recent addition of a new director, the CTL is helping to prepare the next generation of educators by working with graduate and professional school students and postdocs to develop their teaching skills and practices.

“The CTL supports graduate students, professional school students and postdocs through a range of programming that aims to improve the learning experience for Yale undergraduates, while also offering professional development to future faculty that will serve them well in their job search and teaching careers,” said Suzanne Young, director of graduate and postdoctoral teaching development.

Young joined the department in May 2017 after serving as the associate director of Yale’s Center for Language Study. She brings a wealth of knowledge related to course design, teaching innovation, technology-enhanced teaching, and student engagement strategies to the CTL. Young works with Kaury Kucera, associate director for graduate and postdoctoral teaching development and Yale-CIRTL program director, to develop programming and to collaborate with instructional technologists, faculty teaching initiatives staff, and others.

The CTL hires 20 McDougal Graduate Teaching Fellows each year to offer peer workshops, observe classroom teaching, and create learning communities around teaching. Young notes that the CTL helps graduate students to build a culture of teaching for their peers.

“The Graduate Teaching Fellows join the CTL from a range of departments and disciplines and they are selected through an application process based on their commitment to teaching and their readiness to stretch beyond their own discipline,” said Young.

These fellows, with their grounded understanding of Yale’s teaching culture, are the ideal guides for their peers, said Young.

“Our responsibility as graduate teaching fellows is to prepare other graduate students to become TFs (teaching fellows) within their own department,” said Larry Bowman, a current McDougal Graduate Teaching Fellow and a Ph.D. candidate in Ecology and Evolutionary Biology. “We help our peers develop professionally by providing them with numerous workshops, forums, and consultations.”

While Young is new to the CTL, many of the programs devoted to graduate and professional school students and postdocs date back to the Graduate Teaching Center in the Graduate School of Arts & Sciences and the Center for Scientific Teaching — both units are now integrated into the CTL.

One example of programming that has stood the test of time is the Spring Teaching Forum. The forum, organized by CTL Fellows, has historically addressed timely pedagogical discussions on campus. Past forums have focused on the joys of teaching, the grading process, the impact of technology, and the value of diversity in teaching and learning.

“The CTL hosted the 19th annual Spring Teaching Forum with a focus on civic concern in teaching and learning,” said Kucera. “The day-long event was organized by CTL fellows, and it drew participants from across the university — including faculty, postdocs, and graduate students — to discuss how to extend teaching beyond the walls of the classroom.”

Young and Kucera work with the fellows to develop topics for the Fundamentals of Teaching and Advanced Teaching workshop series each year. These workshops take place throughout the academic year and are led by the fellows. Topics for this fall include: using technology-enabled classrooms, understanding the peer observation process, preparing and delivering an effective lecture, understanding gender dynamics in the classroom, and developing inclusive assessment practices.

“‘Gender in the Classroom’ aims to discuss issues of gender in the academy, and will also give graduate students some practical strategies for making their class a more welcoming environment for all students,” said Usha Rungoo, a sixth year Ph.D. candidate in French studies and African American studies and a McDougal Graduate Teaching Fellow. “I think it is important to incorporate empathy and inclusivity at every step of my teaching, and I want to share that philosophy with fellow graduate students and postdocs.”

Yale joined the Center for the Integration of Research, Teaching and Learning (CIRTL) Network, a consortium of research institutions from across the United States that develops training programs to improve STEM teaching and research mentoring, in 2016.

“CIRTL offers Yale graduate students and postdoctoral fellows the opportunity to learn with, and from, peers and educational leaders nationally,” said Kucera. “This exposure is one of the most rewarding outcomes and is especially relevant for those preparing for jobs involving teaching and research mentoring at diverse U.S. institutions.”

“With ever-evolving workshops and new resources for teaching in the 21st century, the CTL is focused on providing graduate students and postdocs with opportunities to develop their teaching practices in a supportive environment,” said Jennifer Frederick, Ph.D., executive director of the CTL.

Working with Undergraduate Students

Overview

The CTL offers a wide range of programs and services to Yale College students, supporting learning in courses and for a host of activities beyond the classroom.

The center also offers programs designed to improve instruction at Yale, training undergraduates and graduate students who supply course support in writing, science, and quantitative reasoning. The most notable expansion of undergraduate training occurred via a partnership with the computer science department. Faculty members in the computer science department voted in April 2016 to expand the use of Undergraduate Learning Assistants (ULA) in Yale College computer science courses. The CTL now trains all ULAs before they begin their role.

The undergraduate learning team at the CTL contributes in various ways to improve teaching at Yale. The staff lead workshops for approximately 75 instructors per year who teach writing sections of lecture courses. The staff also offers special training to teachers in Directed Studies and in the English Department who want to use writing more effectively with their students. The CTL works closely with instructors in the introductory courses in English, who offer some of the best and most intensive writing courses at Yale.

Writing

The Yale College Writing Center within the CTL worked with more than 1,400 students during the 2016 - 2017 academic year on course papers, graduate school and fellowship applications, and writing for publication. Most students engage with the center either by seeing a tutor in a residential college or by visiting the drop-in Writing Partners at the CTL.

Residential College Writing Tutors, also known as Bass Writing Tutors, work in all 14 residential colleges. Many of them are professional writers, most have taught writing courses at Yale or other colleges, and all of them have worked with Yale students for many years. Tutors are familiar with papers from freshman and sophomore courses and have helped students from every department with junior and senior essays.

Writing Partners are Yale College or graduate students selected by the CTL for both their writing skills and their ability to talk about writing. They have a student's-eye view of the challenges faced while writing papers.

The Center also offers tailored support for international students and twice-weekly study halls so that students can write in a supportive environment, and workshops around campus on special projects, such as fellowship essays, law school applications, and writing for Directed Studies. The center offered 52 workshops during the academic year with approximately 468 students.

Undergraduate students used writing services more than 7,500 times from July 2016 to June 2017. Students had 2,455 drop-in sessions: 47 in summer, 1,342 in fall, and 1,066 in spring. Students scheduled and attended 1,577 appointments: 240 in summer, 756 in fall, and 581 in spring. Additionally, students met with Residential College Tutors during the fall 2016 and spring 2017 semesters for 3,755 appointments.

Residential College Writing Tutors helped shape a 'generation of writers':

With a combined total of 50 years of experience as residential college writing tutors for Yale College, Diane Charney and Bill Storandt witnessed the evolution of split infinitives, prepositions, and online schedules. Both retired from Yale at the end of the 2016-2017 academic year.

"I sit here as the grumpy nitpicker, who is trying to protect students from being found lacking in their attention to rules when they are sending out applications for law school and things like that, but at the same time trying to talk frankly with them about what a living thing the language is and how you have to give with the times as things shift," said Storandt, a tutor in Davenport College and staff member since 1996.

The Residential College Writing Program, founded in 1979 as a "drop-in" service for undergraduates, currently employs 14 tutors, one per residential college. By providing "in-house" access to professional tutoring, the program aims to help students grow as writers and to provide guidance as students approach papers and essays for courses throughout their four years at Yale College.

"I'm always interested in the whole person, and ask all kinds of questions so I can feel in touch with the student," said Charney, a tutor in Timothy Dwight College since 1988, and faculty member in the French Department since 1984. "After I create a rapport with them, I look forward to watching them grow up and to spending four years together, and beyond, because I often hear from them later."

Yale's philosophy is that writing is best taught in departmental classes with tutoring resources to support students. The university aims to employ talented and compassionate professionals with decades of experience in the field.

"We are extremely fortunate to have an incredible staff of writing tutors who are committed to supporting our undergraduates," said Alfred E. Guy Jr., the R.W.B. Lewis Director of Undergraduate Writing, and director of undergraduate tutoring at the CTL, and assistant dean of academic affairs for Yale College. "Diane and Bill represent the best of Yale. They have worked with thousands of students, and their impact has shaped a new generation of writers. While we will miss their presence in the colleges, I know students will continue to interact with them in retirement and I wish them well."

Guy manages the CTL's Residential College Writing Program, in addition to Peer Writing Partners, Science and Quantitative Reasoning Tutoring, and the Academic Strategies Program.

"Great faculty encourage their students to see the world through new eyes and from unexpected angles.

Great students know that working collaboratively leads to greater success than working in isolation. Every time I walk through the CTL, I see these principles in action: professors reconfiguring their classrooms physically and metaphorically, students congregating to learn with and from each other. The center has become such an important part of life at Yale."

- Benjamin Polak, Yale provost, the William C. Brainard Professor of Economics, and professor of management

Academic Strategies Program

The Academic Strategies Program, launched and developed in 2016 by Karin Gosselink, offers workshops and mentoring on some of the soft skills that lead to academic success, including Time Management, Working with Faculty, Managing a Heavy Reading Load, Strategies for Problem Sets, Engagement and Note-taking Strategies for Seminars and Lectures, and Exam Study Strategies.

Students may also request a one-to-one mentor who will work with them on these skills and other aspects of achieving academic success at Yale.

During the 2016 - 2017 academic year, the CTL hosted 49 workshops with 314 total attendees. The center also employed nine undergraduate and two graduate students to serve as peer-mentors. The students and CTL staff held 78 individual, one-to-one mentoring sessions.

The program aims to increase access to the undergraduate curriculum for first-generation college students as well as students who came to Yale from under-resourced high schools. In its first year, the program partnered with Yale Athletics and Cultural Houses to reach students across the campus.

"I think the student movement last year highlighted the resources that students needed to succeed at Yale and was an important catalyst for this program...It's more about these soft skills that students need to succeed but also maximize their potential and happiness at Yale."
- Sebastián "Sebi" Pérez '10 GRD '18, an Academic Strategies Peer Mentor

Science and QR Tutoring Programs

During the 2016 - 2017 academic year, the CTL supported more than 2,400 science and quantitative reasoning tutoring appointments/sessions via the Course-Based Peer Tutoring, Residential College Math and Science Tutoring, and Science and QR Tutoring Programs.

Many students work in small groups with Course-Based Peer Tutors selected by a faculty member for specific courses. These tutors are available in addition to faculty and Teaching Fellows associated with the course. The Course-Based Peer Tutors (CBPTs) are undergraduates who, in most cases, have previously taken the course. The tutors, trained by the CTL, attend lectures and are available to students one-on-one and for small group tutoring. CBPTs hosted 909 tutoring sessions with 826 unique students.

The CTL also supports drop-in tutoring led by graduate students who are experts in a general science or quantitative reasoning field. Yale offers tutoring for biology, chemistry, economics, engineering, geology and geophysics, mathematics, MB&B, physics, and statistics in residential colleges via tutors based across the campus. The Residential College Math and Science Tutors had 1,071 appointments with 321 unique students for 65 courses.

Any student enrolled in Yale College and experiencing academic difficulty may request scheduled tutoring, which can supplement going to office hours and getting help from drop-in tutoring. The CTL had 437 scheduled Science and QR Tutoring appointments with 170 students from 55 courses.

In total, the science and quantitative reasoning programs supported more than 90 unique Yale College courses during the 2016 - 2017 academic year.

Working with and beyond Yale

National Initiatives

STEM Education & Evaluation:

The CTL is home to several STEM education and evaluation initiatives. Funded by both federal and private grants, the programs provide STEM educational development to a variety of participants, from Helmsley Postdoctoral Scholars at Yale to faculty and future faculty at more than 350 institutions across the U.S. The initiatives also aim to assess the impact of STEM education development at two levels: program participants and the participants' students. The integration of program development and evaluation is designed to create evidence-based strategies to improve STEM education.

Funded by the Leona M. and Harry B. Helmsley Charitable Trust, the Helmsley Postdoctoral Teaching Scholars Program pioneers innovative teaching approaches in the mathematics and physics departments at Yale. In 2016 - 2017, Dr. Elizabeth Morse Luoma served as program director, Dr. Jennifer Frederick served as principal investigator (P.I.) and the four postdoctoral scholars in the program included:

- Dr. Lake Bookman (Math)*
- Dr. Claudia De Grandi (Physics)
- Dr. Savan Kharel (Physics)
- Dr. Brett C. Smith (Math)

The postdoctoral scholars employ evidence-based teaching methods to create engaging learning environments for undergraduate students with the goal of increasing student persistence in STEM fields.

The postdoctoral scholars also play a vital role in planning and facilitating the STEM Education Seminar and Journal Club series. Originally funded by the Helmsley Charitable Trust, a generous gift from Bruce and Julie Goldsmith will support the series beyond 2017.

The 2016 - 2017 STEM Education Seminar and Journal Club series hosted:

- October 2016: Dr. Todd Zakrajsek, University of North Carolina at Chapel-Hill, "What We Know (and Think We Know) about Teaching and Learning: The Myths and the Evidence"
- November 2016: Dr. Kimberly Tanner, San Francisco State University, "Investigating Common Origins of Diverse Biological Misconceptions: Cognitive Science, Intuitive Reasoning, and the Development of Biological Thinking"
- February 2017: Dr. Tracie Addy, Yale University, "Reflective Teaching: How We Can Assess Instructional Practices and Learning the Process"
- March 2017: Dr. Stanley Lo, U.C. San Diego, "When Active Learning Fails: How Faculty Beliefs and Intentions Inform Their Teaching and Influence Student Outcomes"
- March 2017: Dr. Scot Gould, Claremont McKenna College, "Interdisciplinary Science Education for Science Majors: Accelerated Integrated Science Sequence"
- April 2017: Dr. Joss Ives, University of British Columbia, "Two-Stage Collaborative Group Exams: How and Why"
- April 2017: Dr. David Bressoud, Macalester College, "Teaching Calculus Now: Current Trends and Best Practices"

The STEM education and evaluation team, in partnership with the Helmsley Postdoctoral Scholars, leads and evaluates the annual Summer Institutes on Scientific Teaching (SI). The SIs are dedicated to reforming STEM education, improving science literacy, attracting more diverse students to research, and increasing the number of students who become scientists. The SIs are intensive multi-day workshops held throughout the United States to introduce STEM educators to the principles of

evidence-based teaching. Approximately 170 participants from about 65 colleges and universities attend the institutes each year. The institute format models scientific teaching principles of active learning, assessment, and inclusive teaching. In 2017, the SI team launched a monthly Scientific Teaching in Practice webinar series, an opportunity for Yale faculty and instructors throughout the U.S. to engage with the SI curriculum and community year-round.

Funded by grants from the National Science Foundation (NSF) and the Howard Hughes Medical Institute (HHMI), the STEM evaluation program is a field leader in systems-based evaluation of STEM education initiatives. Dr. Jennifer Frederick is the P.I. for the HHMI grant. Dr. Mark Graham, research scientist in the Ecology and Evolutionary Biology department, is the P.I. for the NSF grant. The program is dedicated to training early career researchers through postdocs, internships, and undergraduate work-study opportunities.

The program is guided by a series of meaningful goals and objectives as current grant awards come to a close. The STEM Evaluation program aims to develop evaluation tools and methods in STEM education, produce data to inform college STEM education initiatives, foster a culture of evaluation and evidence-based teaching at Yale and in the SI community, and create technical and collaborative infrastructures to support STEM education evaluation projects in the Yale and SI communities.

A series of studies by the evaluation team explore key elements related to student learning in scientific teaching contexts. The studies analyzed 5,488 students from institutions across the U.S. who are in courses taught by 67 SI alumni. Findings demonstrated that students' trust of their instructor contributed significantly to positive student outcomes in these courses.

Additional studies have found that scientific instructors persist in the introduction of evidence-based teaching strategies in their classrooms if the instructors perceive a significant number of supports at their institutions, regardless of the number of common barriers.

**Dr. Lake Bookman left the program in late 2017 for a full-time position in Boston and Dr. Marco Bonett-Matiz joined the program in late 2017.*

PA Online:

In March 2015, the CTL and the Yale School of Medicine partnered to announce the school's first online degree: the Yale Physician Assistant Online Program. Together, they selected a platform and supporting partner for the program: 2U, an educational technology company that works with various types of programs at 22 universities/colleges.

In November 2016, the program launched a website and social media channels.

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) conducted an on-campus site visit at Yale in June 2017. In October 2017, the ARC-PA granted Accreditation-Provisional status to the Yale Physician Assistant Online Program sponsored by the Yale School of Medicine.

According to the program's director, James Van Rhee, the first cohort of 44 students will matriculate in January 2018.

Yale Broadcast Studio

As a division of the CTL, the Broadcast Studio helps the Yale community record, produce, edit, and broadcast audio and video and participate in the global media dialog by providing exceptional service, leveraging institutional expertise, and using numerous distribution channels to disseminate final products that meet the goals of its individual clients and the University.

Based out of an 8,000-square-foot facility at 135 College Street, the Studio houses two fully-equipped television studios, an audio recording studio and a fully-integrated videoconferencing room.

Its staff of 10 experienced storytellers, directors, editors, and videographers deliver high-quality audio and video projects throughout the year. The Studio is an essential force behind the CTL's mission to identify new online distribution opportunities that will increase the reach and maximize the impact of teaching at Yale.

In addition to supporting the CTL's mission, the Broadcast Studio helps the Office of Public Affairs and Communications meet its mission to connect members of the media with Yale faculty. The Broadcast Studio also helps Information Technology Services demonstrate technology leadership by collaborating to meet the needs of Yale faculty, staff, and students.

Additionally, the Broadcast Studio supports the Office of the President, the Yale College Dean's Office, Office of the Secretary (including Commencement and Class Day), Yale Hospitality, Yale University Art Gallery, Yale Center for British Art, and many other departments.

The Broadcast Studio's support of digital education provides the technical and creative skills necessary for the CTL to work with faculty across campus to create Massive Open Online Courses (MOOCs), 'flipped' classrooms, and certificate-specific online courses.

Global Initiatives

Yale on Coursera

In the past 16 years, Yale has undertaken important online education projects that have disseminated the best of Yale teaching beyond classrooms in New Haven.

In 2014, Yale partnered with Coursera, an online course platform based in Mountain View, California, to amplify the impact of great teaching. Coursera provides free access to high-quality educational materials with a social, interactive approach designed to assess learning. The platform has more than 25 million learners and 149 university partners, including peers such as Columbia, Princeton, Stanford, and the University of Chicago.

During the 2016 - 2017 academic year, Yale had 19 courses and one specialization (a group of related courses) on the Coursera platform. More than 24,000 learners completed these courses in 2016 - 2017. The following is a list of course titles:

- Journey of the Universe*
- Journey Conversations*
- The Worldview of Thomas Berry*
- Living Cosmology*
- Introduction to Breast Cancer
- Essentials of Global Health
- America's Written Constitution
- America's Unwritten Constitution
- Financial Markets (New Version)
- The Global Financial Crisis
- Introduction to Negotiation
- A Law Student's Toolkit
- Moral Foundations of Politics

- Moralities of Everyday Life
- Music and Social Action
- Introduction to Classical Music
- A Journey through Western Christianity
- Roman Architecture
- *Part of the Journey of the Universe Specialization

Faculty members reflect on their experiences with digital teaching

“Just as the composition of our faculty and the diversity of our student body have changed, our approach to teaching must continue to evolve as well,” said President Peter Salovey during his 2013 inaugural address.

Over the last 18 months, four female faculty members have worked with the CTL to disseminate their knowledge more broadly via massive open online courses (MOOCs) and to experiment with collaborative, digital education initiatives such as a companion mobile application related to a new MOOC and experiential learning opportunities for alumni.

Education at the epicenter of our lives

“Technology is changing the nature of education, which means that faculty with the inclination to experiment should embrace it. Self-directed learning is giving way to collaborative learning,” said Diana Kleiner, the Dunham Professor of History of Art and Classics and the instructor of Yale’s Roman Architecture MOOC. “What excites me most is that online education makes it easier to learn at all times and in all places and thus situates education where it should be — at the epicenter of everyone’s lives — not just during the student years but as a lifelong endeavor.”

Kleiner is an art historian, author, and founding director of Open Yale Courses (OYC), a digital education platform with 42 course offerings from multiple disciplines and departments. Her experience with OYC gave way to Yale’s partnership with Coursera, a MOOC platform based in Mountain View, California.

The university currently offers 19 courses on Coursera and has plans to launch a new MOOC with psychologist Laurie Santos in early-March 2018. Online initiatives at Yale are faculty-driven; the CTL responds to and partners with faculty, chairs, and deans to launch new courses or projects.

“I’ve been teaching online for nearly two decades via three consecutive platforms: AllLearn, Open Yale Courses, and Coursera. The major vehicle has been my best-known lecture course, ‘Roman Architecture,’” said Kleiner.

Kleiner believes that her simultaneous involvement with on-campus and online teaching allows her to apply pedagogical strategies used in one format for the other and vice versa. During the 2017 summer recess, Kleiner and Yale Educational Travel led an experiential learning trip to Italy for the Yale community and alumni of her Coursera MOOC.

“Since I participate actively in the course’s online discussion forums, I already knew many of the participants,” said Kleiner. “Discussions in front of the monuments were collaborative, lively, and thought-provoking and expanded naturally into reflective conversations over meals.”

Kleiner’s field trip incorporates principles of experiential learning, where students first obtain knowledge, perform an activity, and reflect on their experience. “By exploring the ruins of sites studied in the course,” said Kleiner, “students walk away with a better understanding of the material covered in ‘Roman Architecture.’”

From field trips in Italy to discussions about the universe, Yale faculty have adapted the MOOC format to create a range of learning experiences for students.

Expanding educational reach digitally

Mary Evelyn Tucker — first Yale faculty member to launch a Specialization (a series of related courses on a related topic) on Coursera and the first faculty member at the Yale School of Forestry and Environmental Studies to teach a MOOC — introduced her popular Journey of the Universe project to thousands of learners in an online course format. These courses consist of an Emmy Award-winning film, a book published by Yale University Press, and a series of 20 interviews that Tucker conducted with scientists and environmentalists. The Journey project, created over 10 years, weaves together the sciences and the humanities to narrate the epic story of evolution with a concern for the future flourishing of the Earth community.

“If we want to have a broader impact with ideas, clearly we need to engage with the digital world,” said Tucker. “Our scholarly books and articles will reach a relatively small audience, but a film like “Journey of the Universe” has already reached several million through its three-year broadcast on PBS and now through the Yale MOOCs available around the world. In the fall these courses will be offered in Chinese, which will extend their reach as well.”

Tucker now teaches all of her in-residence courses via a hybrid format with lectures and readings online and in-person discussions. She teaches these courses with John Grim, her husband. Both of them are senior lecturers and senior research scholars in the School of Forestry and Environmental Studies, the Divinity School, and the Department of Religious Studies.

“There is no doubt that online education involves a considerable amount of preparation. However, the rewards are palpable when you see the results of focused learning with time for critical questions and engaged discussions,” said Tucker. “I could not accomplish as much with just a seminar class or just a lecture class.”

Mobile app promoting mental health

Tucker’s points are not lost on Laurie Santos, professor of psychology, director of the comparative cognition laboratory, and head of Silliman College. Santos wanted to launch a MOOC and in-residence course focused on the science and practice of well-being after developing a short version of the course for Silliman students.

“I worry a lot about my students’ mental health, and I wanted to do all I could to make sure they’re thriving and living the best lives they can,” said Santos. “The science of psychology has lots of insights about these topics, and I thought it’d be fun to synthesize them and teach the students more about what science says about living better.”

Santos believes that psychology presents a lot of information to help resolve human problems, but empirically-oriented psychologists often face challenges when trying to share or apply their findings to real-world problems.

To help learners enrolled in the course, Santos and the Yale Center for Teaching and Learning are building a mobile application to provide helpful information and daily well-being practices for Yale students, online learners, and those who download the app.

“Digital education platforms can let us harness a bunch of different technologies at once, from in-class videos, to live interviews, to apps to change behaviors,” said Santos. “These platforms can also allow us as educators to reach way, way more students.”

The ‘new generation of learner’

Dr. Anees Chagpar, a noted surgeon and educator, agrees with Santos. Chagpar’s course, “Introduction to Breast Cancer,” launched at the end of 2016, making it Yale’s first MOOC produced by a faculty member from the School of Medicine. It explores the basic biology of the disease, risk factors and prevention, treatment modalities, and survivorship.

“It is a little bit unfathomable to know that we reach not hundreds of students, not thousands of students, but tens of thousands of students all over the world, and it tends to be something that we try to make interactive and continually growing and changing,” said Chagpar. “The responses that I receive on the discussion board and on social media continue to state that students enjoy the course and that they really learned something from it. That is something that I think every professor hopes to hear.”

Chagpar, a lifelong learner herself, has earned an M.D., three master’s degrees, and an M.B.A. in addition to her bachelor’s degree. Her self-described passion for learning has influenced her career trajectory and has inspired her to reflect on how students want to learn.

“I think the new generation of learner is really interested in connecting at a more visceral level with content, such as a 10 to 15-minute lecture with questions interspersed into the lecture so that they can test their understanding of the knowledge right then and there,” said Chagpar. “Having a massive open online course platform really gives you the versatility in terms of how you teach to experiment with different modalities of getting information across that may resonate better with different learners.”

Chagpar designed her course to include interactive sessions with other professors and information disseminated on Twitter to foster live discussion, something often organically created in residential classrooms, she noted.

Democratizing the field

There are certainly challenges to overcome with digital education, including the creation of collaborative and inclusive environments for faculty and students, but the benefits of an accessible education cannot be discounted, note the faculty members.

“I think women face different challenges when putting their content online than men do. Women scholars who put their work online often face comments about their bodies and clothing choices more often than men do,” said Santos. “Women can also experience harassment and threats from work publicized online. So I think there are important gender biases that result in different consequences for men and women.”

Santos is not alone in recognizing that female faculty members face different challenges.

According to the American Association of University Women, “In one study, top female college and university leaders cited discouragement, sabotage, and unfair expectations as barriers to leadership. The women reported a lack of understanding and support from family and colleagues, as well as different expectations for themselves and their male peers.”

Chagpar, who describes her field as a male-dominated occupation, believes that strides have been made but hospitals and universities still have plenty of room for improvement.

“I think we have a lot of work to do to really even the playing field, but I think that one of the nice things about massive open online courses is that it democratizes the field,” said Chagpar. “These are by definition massive, open, and online, which means that they are open to anybody, all over the world. What has been so gratifying to me is that so many people have access to these courses. They are free and they allow people to obtain a background and may give them some confidence to go into fields that may be male dominated.”

CTL helps faculty ‘hit the ground running’

The Center for Teaching and Learning has tried to foster inclusive classrooms on-campus and online by inviting faculty to partake in the Diversity and Education Series, publishing digital resources about strategies for creating inclusive classrooms, and by supporting a range of scholars as they look to teach online.

“Even though journalists sometimes describe a dumbing-down of contemporary culture, there are millions of people worldwide who love to learn for the joy of learning,” said Kleiner. “As the internet links these individuals, the circle of learning expands exponentially. I learn something new every day from the people who participate in my online course. Yale’s new Center for Teaching and Learning offers Yale faculty the opportunity to hit the ground running with digital education, either at Yale through Canvas, or beyond.”

Appendices

Appendix A: Publications by CTL Staff

Addy, T.M., LePrevost, C., McGinnis, C. (2016). When Work Makes You Sick: A Farmworker's Experience in the Field. National Center for Case Study Teaching in Science Database.

Addy, T.M., Philips, K., Stevenson, M. (2016). Bringing Home More than a Medal: An Olympian's Battle Following Zika Virus Infection. National Center for Case Study Teaching in Science Database.

Aragon, O.R., Dovidio, J.F., & Graham, M.J. (2016). Colorblind and multicultural ideologies, and faculty adoption of inclusive teaching practices. *Journal of Diversity in Higher Education*: 10.1037/dhe0000026

Cavanagh, A.J., Aragon, O.R., Chen, X, Couch, B, Durham, M., Bobrownicki, A., Hanauer, D.I., & Graham, M.J. (2016). Student buy-in to active learning in a college science course. *CBE-Life Science Education*. 15(4) ar76.

Cavanagh, A.J., Chen, X., Bathgate, M.E., Frederick, J., Hanauer, D.I., & Graham, M.J. (2017). Trust, growth mindset, and student commitment to active learning in a college science course. *CBE—Life Sciences*, 17(1).

Hanauer, D.I., Graham, M.J., & Hatfull, G.F. (2016). A measure of college student persistence in the sciences (PITS). *CBE-Life Sciences Education*. 15(4), ar29.

Kallestinova, E. (2017). Crafting an Argument in Steps: A Writing Process Model for Graduate and Professional Students with LD. *Learning Disabilities--A Contemporary Journal*, 15(1).

Moss-Racusin, C., van der Toorn, J., Dovidio, J.F., Brescoll, V.L., Graham, M.J., & Handelsman, J. (2016). A 'Scientific Diversity' intervention to reduce life scientists' gender biases. *CBE-Life Science Education*. 15(3), ar29.

Niemi, N.S. (2017). *Degrees of Difference: Women, Men, and the Value of Higher Education*. New York: Routledge.

Reeves, T. D. Hake, L. E. Chen, X. Frederick, J. Rudenga, K. Ludlow, L. H. O'Connor, C. M. (2017 forthcoming). Does Context Matter? Convergent and Divergent Findings in the Cross-Institutional Evaluation of Graduate Teaching Assistant Professional Development Programs. *CBE – Life Sciences Education*, forthcoming.

Appendix B: DEI Grant Awardees

2016 DEI Grant Awardees:

- Anya Adair, Teaching from a Broken Record: Digitally Enabled Lessons in Reading Slowly
- Matt Davis, The Chrononaut Club
- Daniel Jones, Take Credit: An App to Prevent Plagiarism in the College Classroom
- Emil B. Kromann, Sagan
- Kara Yoo Leaman, From Music to Dance: Broadening Undergraduate Music Humanities with Choreomusical Analysis
- Santiago Muñoz Arbeláez, Digital Platform for Learning Early Modern Spanish Paleography
- Maria Garcia Rios, Community-engaged and Collaborative Learning: Broadcasting New Haven's Latino Voices
- Sara Sanchez-Alonso, WikiBrain: A Language-Brain Mapping Wiki to Facilitate Critical Thinking of Language Processing Literature in Introductory-Level Classes

- Thomas Schmidt, Social Networks in Early Christianity
- Janine Stockford, Understanding America Online Resource

2017 DEI Grant Awardees:

- Larry Bowman, Bloomtime: an integrated educational app to optimize assessment length and design
- Kenichi Okamoto, "Give Me Fever!" A cross-platform, cloud-base app for teaching infectious diseases
- Ethan Perets, "Cite & Share" An app for group distribution of references and securing intellectual diversity in the classroom
- Raphael Sarfati, Trail Visualization Project
- Jacob A. Spies, "Ansatz" Lowering the Barrier to Using Computers in Chemistry

Appendix C: Advanced Teaching Workshops

2016-2017 Workshop Themes included:

- Gender in the Classroom
- Teaching without Technology
- Promoting Writing Excellence
- Mentoring in the Lab
- Preparing and Delivering an Effective Lecture
- Peer Observation
- Social Media in the Classroom
- Mentoring Undergraduates
- Teaching in the Technology-enabled Classroom

[Appendices Continued on Next Page](#)

Appendix D: Associates in Teaching Program

Instructors	Department	Course Title
Professor Narges Erami and Samar Al-Bulushi	Anthropology	<i>Human Rights & Social Justice</i>
Professor Erik Harms and Elliott Prasse-Freeman	Anthropology	<i>The Anthropology of Human Rights</i>
Professor Jessica Brantley and Ann Killian	English	<i>Medieval Women's Writing</i>
Professor Stephanie Newell and Denise Lim	English, Sociology, African Studies	<i>The Sociological Imagination in African Literatures</i>
Professor Edward Cooke and Sequoia Miller	History of Art	<i>Craft, Design, and Art: Domestic Architecture and Decorative Arts Since 1900</i>
Professor Brigitte Peucker and Kirsty Dootson	History of Art, Film and Media Studies	<i>Painting and Cinema</i>
Professor Michael Della Rocca and Julia Borcharding	Philosophy	<i>Reconsidering Early Modern Rationalism</i>
Professor Katerina Clark and Masha Shpolberg	Program in Film & Media Studies	<i>War on Film</i>
Professor Frederick Wherry and Andrew Cohen	Sociology	<i>Advertising & Society</i>
Professor Leslie Harkema and Diego del Río Arrillaga	Spanish and Portuguese	<i>Introduction to the Cultures of Spain</i>
Professor Margaret Peters and Elizabeth Iams Wellman*	Political Science	<i>The Politics of Migration</i>

Appendix E: CTL Staff Members 07/01/16 - 06/31/17

Pilar Abuin, Director of Educational Technology;

Tracie Addy, Former HHMI Program Director, Current Associate Director of Faculty Teaching Initiatives;

Diane Altschuler, Senior Administrative Assistant; *

Ronice Awudu, Business Operations Supervisor;

Meghan Bathgate, Postdoctoral Associate;

Timberley Barber-Marini, Associate Director of Educational Technology;

Yvette Barnard, Senior Administrative Assistant; *

Aiyana Bobrownicki, STEM Evaluation Project Administrator; *

Jude Breidenbach, Associate Producer for the Broadcast Studio;

Julie Byron, Senior Administrative Assistant;

Andrew Cavanagh, Postdoctoral Associate; *

Madeline Cavanaugh, Senior Administrative Assistant;

Daniel Cody, Producer for the Broadcast Studio;

Enit Colon, Senior Administrative Assistant; *

Christine Costantino, Assistant Director of Educational Technology;

Sara Epperson, Director of Digital Education;

Walter Foery, Senior Administrative Assistant; *

Douglas Forbush, Associate Director for the Broadcast Studio;

Jennifer Frederick, Executive Director of the Center for Teaching and Learning;

Abby Goldblatt, Senior Human Resources Generalist;

Karin Gosselink, Assistant Director of Undergraduate Writing Programs, Director of the Academic Strategies Program;

Mark Graham, STEM Evaluation Director; *

Alfred E. Guy, Jr., Director of Undergraduate Writing and Tutoring Initiatives;

John Harford, Director of Educational Technology and Media;

David A. Hirsch, Director of Academic IT Strategy;

Julia Istomina, Assistant Director of the Graduate Writing Lab;

Elena Kallestinova, Director of the Graduate Writing Lab;

Philip Kearney, Manager of Broadcast & Distribution Solutions for the Broadcast Studio;

Trip H. Kirkpatrick, Associate Director of Educational Technology;

Andy Koss, Production Assistant for the Broadcast Studio;

Kaury Kucera, Associate Director of Graduate and Postdoctoral Teaching Development;

Jennifer Lawlor, Assistant Director of Educational Technology;

Stacey Lawrence, Assistant Director of Graduate and Postdoctoral Teaching Development; *

Rick Leone, Director for Yale Broadcast Studio;

Kelly Locke, Assistant Administrator;

Elizabeth Morse Luoma, Director of STEM Education Programs;

AnnMarie Macionus, Administrative Assistant; *

Jane Manweiler, Research Associate; *

Ryan McEvoy, Video Producer and Editor for the Broadcast Studio;

Tania Melo, Accountant; *

Michelle Morgan, Assistant Director of Educational Technology;

Jack Neiswanger, Producer of the Broadcast Studio;

Alina Nevins, Academic Web Developer;

Nancy Niemi, Director of Faculty Teaching Initiatives;

Margaret O'Brien, Director of Finance and Administration;

Patrick O'Brien, Communications Officer;

Guy Ortoleva, Video Producer and Editor for the Broadcast Studio;

Pam Patterson, Associate Director of Educational Technology;

Brian Pauze, Assistant Director of Educational Technology & Media;

Holly Piscatelli, Senior Director of Business Operations;

Belinda Platt, Assistant Director of Digital Education;

Kailasnath Purushothaman, Director of Residential College Science and QR Tutoring;

Philip Reeves, Assistant Director of Educational Program Assessment;

Matthew Reynolds, Associate Director of Digital Education;

Francis Robinson, Academic Technology Analyst; *

Keni Sabath, Woodbridge Fellow; *

Sanjana Singh, Assistant Director of Educational Technology & Media;

Scott Strobel, Deputy Provost for Teaching and Learning;

Thom Stylinski, Media Producer for the CTL;

Lucas Swineford, Executive Director of Digital Education;

Melissa Thomas, Associate Director of Digital Education;

Craig Tomlin, Producer for the Broadcast Studio;

Jonathan Waterhouse, Program Administrator;

Ryan Wepler, Assistant Director of the Undergraduate Writing Program;

Suzanne Young, Director of Graduate and Postdoctoral Teaching Development;

**Formerly at the CTL, but not currently at the CTL as of January 2018*

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