

UC Berkeley Research, Teaching, & Learning

2024 Annual Review



Welcome

The Research, Teaching, & Learning (RTL) organization within the Division of Undergraduate Education is committed to advancing Berkeley's teaching and research mission. Our specialized teams collaborate with instructors, researchers, and academic staff to provide tailored support and innovative solutions through consultations, resources, and tools all to foster a more inclusive and effective learning environment.



UC Berkeley Research, Teaching, & Learning

2024 Annual Review

Contents

Welcome	p 2
How RTL Supports Berkeley	p 4
Research	p 6
Teaching	p 8
Learning	p 12
KALX Radio	p 15

How RTL Supports Berkeley



64,342
bCourses users

51,965
Kaltura viewers/
contributors

50,678
Student Response
Systems users

44,677
Gradescope
users

38,425
Ed Discussion
users

32,002
Course Capture
users

9,178
RTL Update +
Teaching newsletter
subscribers

7,400
Data Hub users
per month



*Statistics
from AY24

1,616
Instructional
Labs users

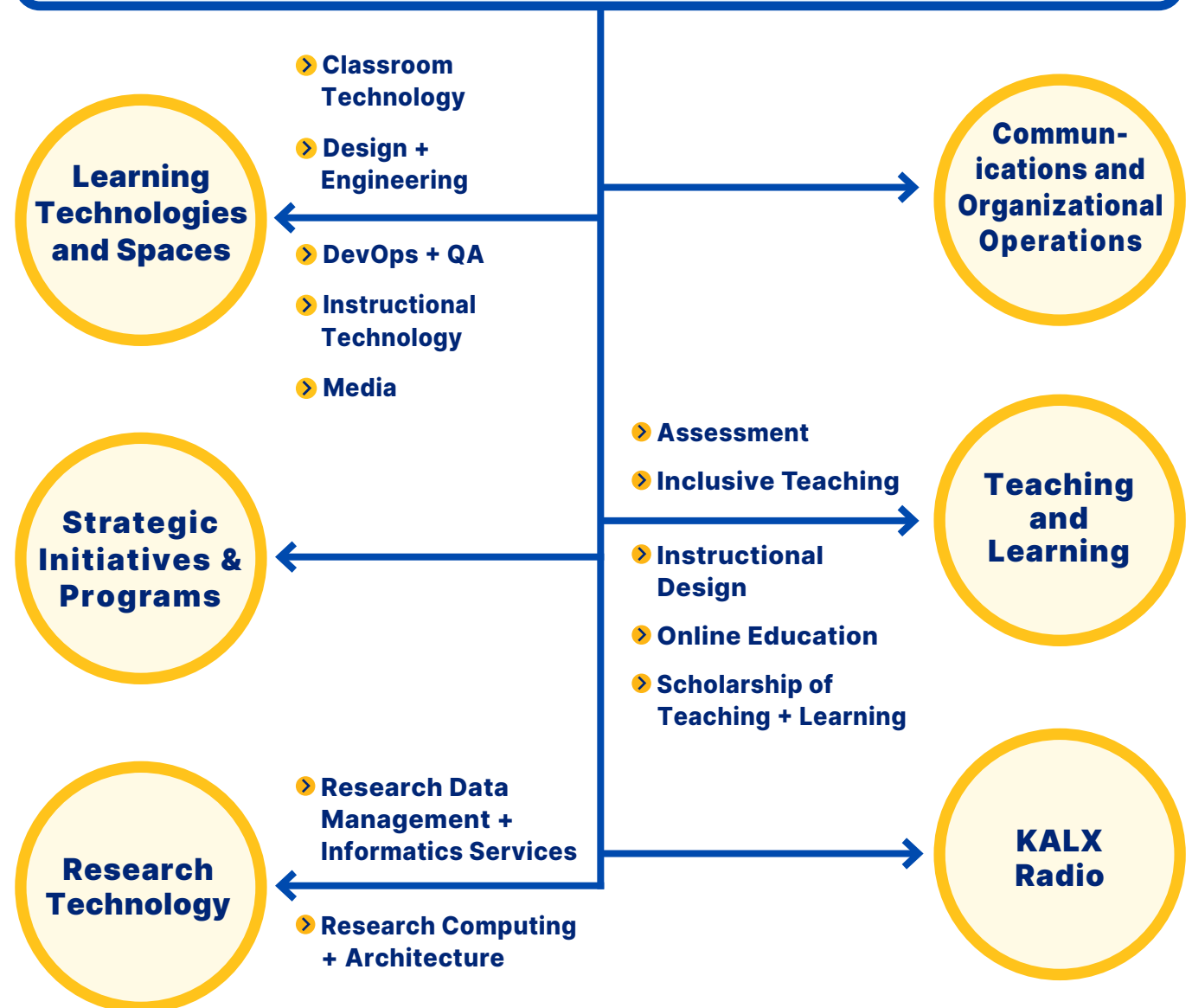
562
Virtual
Labs users

51
CTL cohort program
participants

36
RTL Workshops

Research, Teaching, & Learning

RTL offers foundational services and programs to support UC Berkeley's academic and research communities



Research

Advancing discovery through data and computing services developed in partnership with the campus research community

Research IT provides research data and computing technologies, consulting, and community for the UC Berkeley campus with the goal to advance research through IT innovation. Recent successes include:

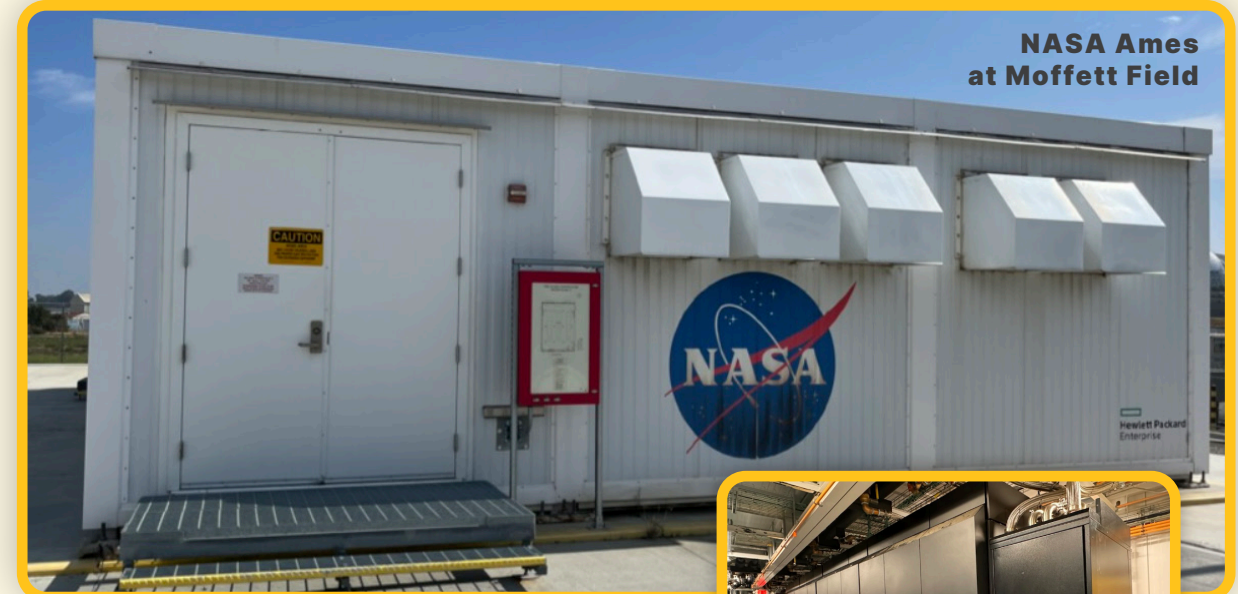
- Maintained **Digital Research** platforms and services to enable high performance computing, secure computing, research data management, scalable virtual computing environments, and museum informatics.
- Designed, implemented and operationalized the Secure Research Data and Compute platform (SRDC) for work with highly sensitive data.



- Pursued new and innovative ways to engage our undergraduate students in the research mission of our campus through access to data together with new computational platforms (e.g., Jupyter Notebooks).
- Created the position of Research Cyber Security Director—“Security is built-in.”
- In collaboration with UCSF, developed an innovative bi-campus computing proposal to support the UCSF/UCB joint degree program, Computational Precision Health.
- Expanded the Savio HPC condo contribution program to support the addition of highly specialized Graphics Processing Units (GPUs). To date researchers have contributed over \$1.5M of GPU nodes to the system. These nodes are now a campus resource.
- Advocated for researchers in driving the need for transformational upgrades to the campus core data network—work now underway.

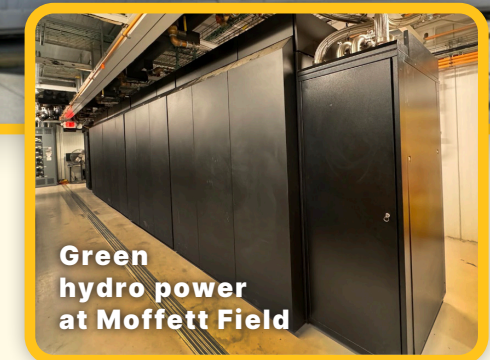
Spotlight

NASA-Berkeley Partnership Empowers Research



NASA Ames at Moffett Field

Research IT engaged in strategic partnership with NASA Ames at Moffett Field in support of research computing as well as advisement on the **Berkeley Space Center's** data & computing infrastructure.



Green hydro power at Moffett Field

Holistic Research Data Support for Researchers

The Research Data Management (RDM) Program empowers Berkeley researchers and the campus research community to securely and efficiently manage research data. We provide expert consultation throughout the research process and engage with campus researchers to understand research workflows and advise on handling research data, with an emphasis on connecting to campus supported research infrastructure.

The RDM Program works continuously to identify unmet campus research data management needs and strives to develop solutions with campus partners to meet those needs while being responsive to the changing ways that researchers work with data at UC Berkeley. We are a partnership between UC Berkeley Library and Research IT to support the lifecycle of research data on campus.

Teaching

Promoting inclusive instruction that creates engaging learning experiences for every student at Berkeley

By modeling equitable and inclusive working strategies, we advance individual and collective understanding of what it means to be an equity-minded educator. To this end, we have:

- ▶ Developed **Teaching Guides** as a resource that reflect evidence-based strategies from educational research.
- ▶ Designed a new resource, **Teaching Innovation Showcase**, which spotlights creative curricular examples, providing a source of inspiration and practical, actionable resources for educators.
- ▶ Offered new RTL workshops spanning **six unique categories**, each designed to provide essential teaching tools and best practices.

Key Programs

To spotlight teaching innovation and offer opportunities that will enrich, promote, and support teaching and learning effectiveness, CTL offers grants, cohort-based learning programs, awards and recognition programs, communities of practice and more.

Distinguished Teaching Award (DTA)

CTL supports the Committee on Teaching's efforts in recognizing excellent faculty with the Berkeley campus' most prestigious award for teaching through this program. It was initiated in 1959 to encourage and reward excellence in teaching on the Berkeley campus.

Lecturer Teaching Fellows (LTF)

Lecturers at Berkeley are offered an exceptional opportunity through this program to meet regularly with colleagues from across campus to discuss teaching issues. Ten Lecturers are selected annually to participate in a series of workshops focused on teaching and learning.

Teaching Excellence Colloquium (TEC)

The Teaching Excellence Colloquium is designed to provide Senate faculty new to Berkeley with the knowledge, tools, and inspiration to advance their teaching skill set and promote meaningful learning experiences for their students. Participating faculty also become part of a cohort of peer educators across many disciplines.

Spotlight

2nd Annual Teaching & Learning Conference



Instructional designer, Courtney Gomas, presenting a workshop



Abigail De Kosnik, keynote speaker



This event aimed to foster a community of colleagues engaged in effective teaching and learning on our campus and present model cases of educators experimenting with a diverse range of teaching and learning strategies in UC Berkeley classrooms. This year's theme was "Inclusive Teaching is Effective Teaching: Sharing Inclusive Teaching Strategies to Advance Equity" and featured keynote speaker, Abigail De Kosnik.

[Watch the 2024 Keynote](#)

Mark your calendars for the 3rd Annual Teaching & Learning Conference on **May 9, 2025**

Online & Hybrid Course Design Institute (OHI)

The Online & Hybrid Course Design Institute (OHI) was established in 2023 with the support of a UC Online grant to assist instructors in creating more inclusive course materials. At the core of OHI is a focus on equitable teaching practices, considering how online and hybrid course development

can be a pathway for developing course materials, activities, and assessments that ensure an inclusive learning experience for all of your students. The inaugural program included 28 participants across 20+ departments and due to its success, the OHI program is offering Spring 2025 and Summer 2025 sessions.

Presidential Chair Fellows (PCF)

The relaunched PCF grant program provides an opportunity for a team of two or more faculty members to transform undergraduate education through Scholarship of Teaching and Learning (SoTL). The theme for PCF 2023-25 is “Reimagining student learning in a research-intensive institution” where projects are tackling such questions as:

- How can faculty leverage world-class research to advance undergraduate education?
- How do students learn best in a research-intensive environment?
- How can we promote deeper student engagement in learning?
- What new barriers to learning arise in a research-intensive space and how can we address these barriers?
- How is learning affected by how we define student success and does redefining success impact learning?

Provost’s Teaching For Equity & Inclusion Faculty Course

This new faculty course, scheduled for Spring 2025, is designed to raise awareness of potential inequities both faculty and students face when engaged in the process of teaching and learning. It will also help faculty identify and develop one to two instructional changes to address a specific student learning need in their course context and/or curriculum. The course-level learning outcomes of this program will allow selected faculty to:

- ➊ Develop a community of like-minded educators around shared teaching values
- ➋ Reflect on how your positionality informs your teaching and impacts student learning and experiences
- ➌ Explore and practice with teaching frameworks designed to enhance learning for students of color and students with disabilities as a starting point for strengthening your skill set as an equity-oriented teacher

Spotlight

New Web Resources Grounded in Research That Promote Inclusive Instruction

A Social Justice Approach to Teaching in Difficult Times

As global tragedies and crises become more hypervisible in our increasingly connected world, it is more and more likely that students in your class(es) are, in some way, impacted by current local, national, or global events. This resource offers suggestions for dealing with the effects of these events in your classroom communities, drawn primarily from **trauma-informed** and **social justice** approaches to teaching.

Disability Justice In Teaching

Barriers due to disability are a **longstanding issue in higher education**. Disability justice seeks to identify and disrupt the systemic influences that lead to the exclusion and discrimination of people with disabilities. Teaching practices grounded in disability justice bring intentional focus and awareness to creating accessible learning environments, services, instructional strategies, and tools such that everyone, regardless of neurodiversity, disability, and health, can benefit from them.

Gender Justice in Teaching

Gender-just teaching, or teaching that seeks to advance **gender justice**, draws on feminist and transgender educational frameworks that center the experiences of students **marginalized on the basis of gender**. This includes women, transgender people, nonbinary/agender/genderqueer people, and people otherwise perceived as gender-nonconforming. Above all, a gender justice approach to teaching celebrates the **unique knowledges** that students oppressed under genderism bring to educational spaces and **foregrounds their success and thriving therein**.

Instructor Guide to DSP Accommodations

The Disabled Students’ Program (DSP) Faculty Liaisons, Justin Davidson and Jonah Levy, are colleagues that can provide information about DSP policies, and how to effectively navigate and advocate for the needs of faculty and students. They partner with DSP to support faculty with disability-related academic concerns and have provided excellent resources on the CTL website including a **10 Point Guide on Common Issues in Handling DSP Accommodations** and **Addressing DSP Accommodations in Your Syllabus**.

Learning

Fostering equitable learning environments by supporting accessible academic technology tools, classrooms, and course content

RTL has also led the charge in revolutionizing instructional technology on campus and since 2020, expanded support from 11 to 21 instructional technology platforms, including the adoption of DataHub, Berkeley's instance of Jupyter. RTL provides service management, support and consultations for teaching and learning technologies, including the learning management system (bCourses), course capture, video management, online discussions and polling tools, course evaluations, and academic integrity and accessibility software.

Classroom Innovation

RTL is actively driving Berkeley's commitment to accessibility by significantly expanding lecture capture capabilities, increasing coverage from 35 classrooms pre-pandemic to 99% of general assignment classrooms today, fundamentally transforming instructional delivery across campus. Berkeley's Classroom Technology team continues to successfully roll out our new Flex Classroom technology standard which will be

implemented across campus over the next few years. When Fall instruction began, there were two standard Flex Classrooms and three Active Learning Flex Classrooms. Since then, three more Flex classrooms have been installed in the Social Sciences building, with a few newly refreshed rooms being completed each month throughout this semester.

Notable functionality of a Flex Classroom includes microphones built into the ceiling, wireless display, interactive whiteboards with annotation features, ad-hoc recording and easy remote connections over Zoom without the need to bring in your own device.



Spotlight

Learning Paths: A New Approach to Faculty Development

We recognize that learning is a complex process influenced by multiple factors, including prior knowledge, motivation, and learning preferences. Our Learning Paths provide a flexible framework that caters to the diverse interests and goals of our instructors, empowering them to explore differentiated teaching strategies. These Learning Paths also align closely with the

principles of Universal Design for Learning (UDL), a framework that emphasizes providing multiple means of engagement, representation, and expression. By offering various ways to engage—Attend, Read, Watch, Engage, Practice, Reflect, and Share—we allow instructors to take ownership of their learning journey and choose what works



best for them. This initiative is the result of collaboration and innovation, leveraging existing resources to bridge technology and pedagogy and create a comprehensive learning experience.

The goal of this new standard is to create memorable and meaningful experiences for our students while providing opportunities to enhance teaching and learning.

[Learn more about the work of RTL's Classroom Technology Services team](#)

Learning Pilots

RTL is in the midst of piloting several learning tools and new academic technology to address emerging needs that will support the academic community. These include:

AI Detection

A new feature of Turnitin is being piloted for feasibility.

Grade Distribution Dashboards

A set of custom-built dashboards in bCourses to provide instructors with a high-level view of student grade trends in their own courses.

Peer Learning and Feedback

A new tool within bCourses that allows students to provide feedback on assignments from peers.

Digital Accessibility

A new Digital Accessibility tool within bCourses to give instructors better tools to design more accessible content.

Spotlight

Berkeley Online Advising (BOA)

BOA is a custom-built, educational equity focused platform for online student advising and an analytics service created in partnership with advisors for Berkeley advisors.

Impact of BOA

Student Impact

- 30k+ students per year
- Support for systemically marginalized students

Advisor Impact

- 500+ advisors using BOA (over 50% of advising community)
- Features customized for Berkeley advising community

Campus Impact

- Singular source of record for advising services
- Custom reporting for federal compliance and grants for first-generation, low-income, and disabled students.
- Robust security, privacy, and accessibility
- Foundation for the creation of a campus wide data lake

AI Tools and Resources for Teaching and Learning

RTL is committed to using technology that supports teaching and learning effectively and responsibly. This includes understanding how Generative AI (GenAI) tools might be used within the resources we provide.

➤ [General AI in Teaching and Learning at Berkeley](#)

➤ [Understanding AI Writing Tools & Their Uses](#)

➤ [Transparency About Generative AI Tools](#)

➤ [UC Responsible AI Principles](#)

➤ [Appropriate Use of AI Tools](#)

➤ [Draft Generative AI Guidelines](#)



KALX is creating extraordinary radio in the basement of the Social Sciences Building

As UC Berkeley's Award winning radio station entered its 61st year, there's been no slowing down with new programming, a revamped [website](#), a huge increase in student participation, and studio upgrades. Recent developments include:

- Planning for a new digital music library
- Video streaming bands that play live in the KALX studio

- Created the Berkeley Brainwaves program highlighting the work of faculty, graduate and undergraduate students, and staff for the community
- Installing digital soundboards in studio upgrades
- Continuing collaboration with the Graduate School of Journalism and the award winning Northgate Radio



Learn more about RTL services and programs at
rtl.berkeley.edu