# Eberly Center

**Teaching Excellence & Educational Innovation**

Diversity
Equity
Inclusion
Belonging

*Student Learning Experience*

Data
Informed
Teaching

Technology
Enhanced
Learning

## Annual Report
## 2023
## 24

# Evolve &

## a culture of teaching

*"The Eberly Center is constantly evolving to enhance our support for CMU instructors and their students."*

# Enhance

*"We launched new programs, services, resources, and scholarship on adapting teaching to generative AI, anti-racist pedagogy, supporting neurodiverse students, indigenous ways of knowing, formative assessment of teaching, alternative grading strategies, and more."*

**Chad Hershock, PhD**
Executive Director

The Eberly Center cultivates diversity, equity, inclusion, and belonging (DEIB), supports educational innovation, and enhances teaching and learning at CMU and beyond through 1-on-1 consultation services, group programs, DIY web resources, and scholarship.

Our expertise creatively combines data science, technology-enhanced learning, and research-based learning principles to meet emerging educational development needs.

Our DEIB- and student-centered approach is evidence-based, collaborative, and formative, rather than evaluative, allowing us to meet each instructor wherever they are in their development as educators and then help them iteratively refine their teaching and student learning.

Approximately half of our work supports CMU's faculty and staff, with the other half supporting student and postdoctoral educators.

This annual report highlights the depth and breadth of our reach and contributions in the academic year 2023-24.
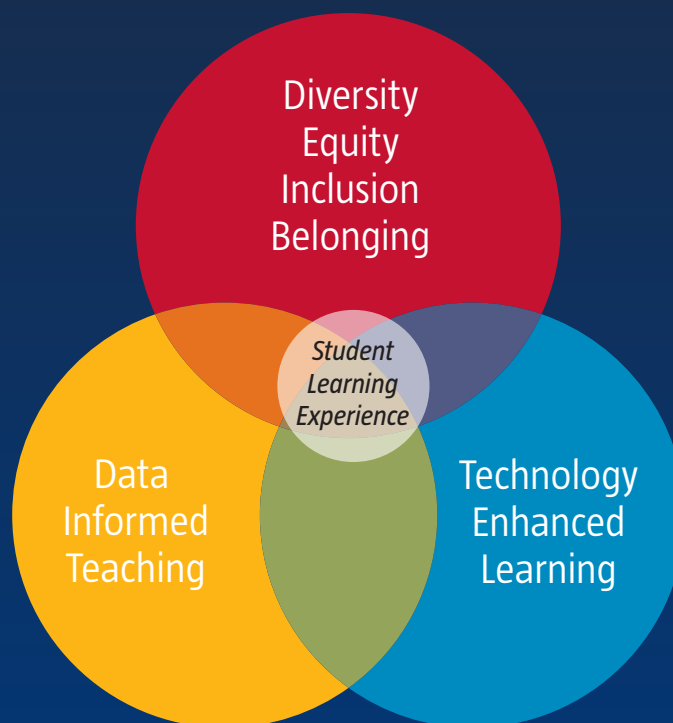
# Annual Report
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# 24

# Eberly Center Core Values

Diversity
Equity
Inclusion
Belonging

Student
Learning
Experience

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## Eberly Center programs and services embody our values
### Selected highlights include...

### Improving teaching through data-informed practices

We help instructors collect, analyze, and interpret rigorous quantitative and/or qualitative data on learning outcomes to iteratively refine teaching and learning, including:

**238 educators** using learning data to improve outcomes in the context of:
- **165 courses**.
- **76 program-level services** for CMU academic and student support units.

**169 Early Course Feedback Services** gathering anonymous, formative feedback from students for **112 instructors** in **146 CMU courses**.

### Centering diversity, equity, inclusion, and belonging in our programs & services

We help instructors recognize and identify effective DEIB strategies to incorporate in their teaching practices. At the university, college, and department levels, we designed and facilitated:

**12 DEIB programs attended by 220 faculty/ staff instructors** (who filled 231 seats).

**9 DEIB programs attended by 394 graduate students and postdocs** (who filled 429 seats).

We also supported **21 Provost's Inclusive Teaching Fellowships** implementing projects to enhance DEIB in their course design and/or delivery.

### Enhancing, innovating teaching & learning with technology

We provide Technology-Enhanced Learning (TEL) tools and services to support educators in creating new or enhanced teaching and learning opportunities. This year we:

Responded to **3,454 instructor requests for technical support** with various tools (e.g., Canvas, Gradescope, plagiarism detection, GenAI).

Supported **147 instructors incorporating TEL** in remote and in-person modalities.

Sustained and evolved CMU's TEL ecosystem to meet our community's teaching needs, including: **42 third-party TEL tools, 4 new tool** development efforts, and **a suite of vetted generative AI tools**.

## Eberly Center
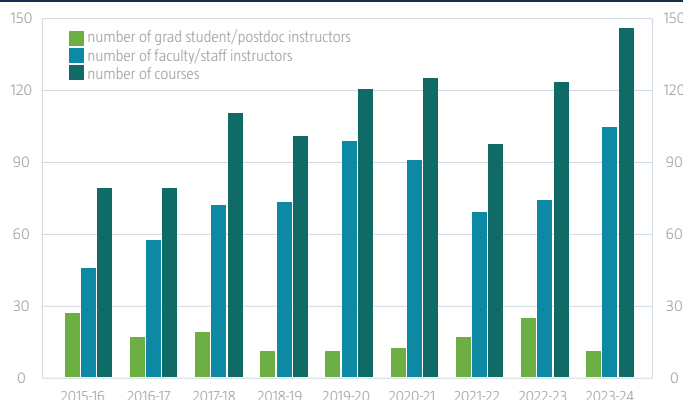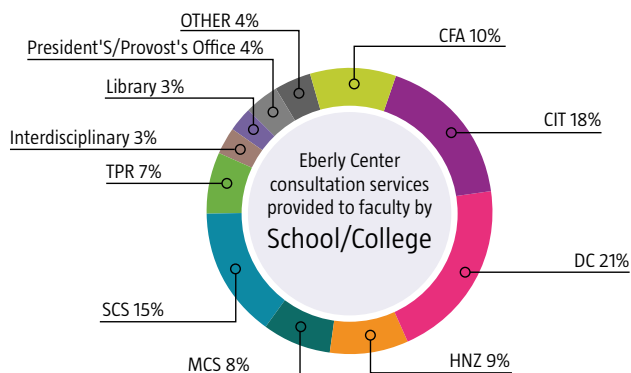### Teaching Excellence & Educational Innovation

# Demand for services continues to increase

## Eberly Center supported 713 faculty/staff through consultations and group programs

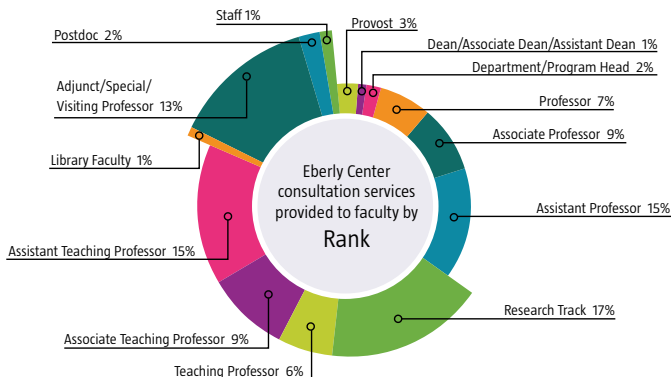### CMU instructors served by Early Course Feedback (ECF) Services



- number of grad student/postdoc instructors
- number of faculty/staff instructors
- number of courses

(Bar chart with years 2015-16 through 2023-24, y-axis 0–150)

### We support instructors across all course types and disciplines



Eberly Center consultation services provided to faculty by **School/College**

- OTHER 4%
- President'S/Provost's Office 4%
- Library 3%
- Interdisciplinary 3%
- TPR 7%
- SCS 15%
- MCS 8%
- HNZ 9%
- DC 21%
- CIT 18%
- CFA 10%

### We serve instructors of all experience levels



Eberly Center consultation services provided to faculty by **Rank**

- Staff 1%
- Postdoc 2%
- Adjunct/Special/Visiting Professor 13%
- Library Faculty 1%
- Assistant Teaching Professor 15%
- Associate Teaching Professor 9%
- Teaching Professor 6%
- Research Track 17%
- Assistant Professor 15%
- Associate Professor 9%
- Professor 7%
- Department/Program Head 2%
- Dean/Associate Dean/Assistant Dean 1%
- Provost 3%

## 2024
## 2023

### Consultations served approximately 1 in 5 CMU faculty

In AY 2023-24, we provided **consultation services for 384 faculty/staff educators teaching 373 CMU courses** on evidence-based teaching strategies, technology-enhanced learning, and/or assessment of student outcomes. These services supported:

- 42 CMU-Qatar, 10 CMU-Africa, and 5 CMU-Silicon Valley faculty
- *NEW* 25 Generative AI Teaching as Research (GAITAR) Fellowships for faculty
- 21 Provost's Inclusive Teaching Fellowships (PITF) for faculty
- 8 Wimmer Faculty Fellowships for the Development of Teaching for faculty

### New and signature programs served emergent needs of instructors

We designed and facilitated **professional development programs attended by 499 faculty and staff educators filling 726 seats**. Total attendance increased by 41% for faculty/staff, representing 48% more seats filled compared to the previous year.

*NEW programs included:*

- Workshops: Adapting to Generative AI in the Classroom
- Workshop: Introduction to Neurodiversity and Neuro Inclusive Learning
- Program assessment workshops, presented in collaboration with the Vice Provost for Teaching and Learning Innovation
- Customized pedagogical and/or technology-enhanced learning workshops
- Teaching as Research Institute: Innovating with Generative AI
- Special Interest Group: Indigenous Ways of Knowing
- Special Interest Group: Teaching Teamwork
- Workshop: Inclusive Mentorship for NSF REUs

*Recurring programs included:*

- Incoming Faculty Orientation
- 7th Annual CMU Teaching & Learning Summit
- Spotlight on Innovative CMU Teaching: Generative AI
- Workshop: Teaching in Tumultuous Times

We served 709 postdoctoral, graduate, and undergraduate students
through our consultation services and programs
on teaching and learning

## Highlights include:

- **520 Teaching Assistants and Instructors of Record** attended campus-wide Graduate and Undergraduate Student Instructor Orientations, preparing them for their CMU teaching responsibilities across **47 academic units**.
- **176 graduate students and postdocs** filled **307 seats** at our other university-wide seminars and workshops on evidence-based teaching and learning principles.
- **140 graduate students and postdocs** received **229 individual consultations** on teaching.
- **41 graduate students and postdocs** attended the second annual Mentoring Undergraduate Researchers Institute (co-hosted by the Office of Undergraduate Research and Scholar Development).

We supported **256 graduate students and postdocs** in our *Future Faculty Program*, preparing them to teach effectively and inclusively as junior faculty members.

- **78 new participants** enrolled in the program.
- **22 participants** completed program requirements.

## Teaching Consultation Fellows (TCFs)

- **We trained 12 graduate student and postdoctoral TCFs** in advanced, evidence-based teaching methods and teaching consultation techniques.
- **TCFs provided 90 teaching consultation services for 55 graduate students and postdocs.**

### Teaching Consultant Fellows (TCFs)

**Elizabeth Dieterich**
English

**Laura DeLuca**
English

**Michael B. DeSalvo**
Modern Languages

**Luis Garcia**
School of Design

**Joel Gonzalez**
Electrical & Computer Engineering

**Eunji Jo**
English

**Steven Moore**
Human-Computer Interaction

**Rachael Mulvihill**
English

**Thuy Nguyen**
Engineering & Public Policy

**Ashley E. Orr**
Heinz

**Alex Tabor**
Department of History

**Elizabeth C. Walker**
English

**James Zhu**
Mechanical Engineering

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Our award-winning website
provides a treasure trove of DIY resources on
evidence-based teaching and learning

### >1.43 million visitors annually to
**https://www.cmu.edu/teaching/**

*Highlights include:*

- Anti-racist Pedagogy
- Alternative Grading Strategies (Ungrading and Specifications Grading)
- FAQ regarding generative AI in education
- Teaching as Research

### Spotlight on Innovative CMU Teaching

CMU instructors are innovators. Faculty and student instructors share their creative, transferable solutions to common teaching and learning challenges.

*https://www.cmu.edu/teaching/spotlight/*

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### CMU Online

- **Designed 4 new online courses** in preparation for the Fall 2023 launch.
- Supported design and production of **CMU Online public-facing website**. https://www.cmu.edu/online/
- **Online TEL ecosystem: 5 new tools** were vetted, integrated, or developed to support the ecosystem for online learning.

### Core Competencies Initiative (CCI):

- **CCI website:** Supported design and production of the Core Competencies website. https://www.cmu.edu/corecompetencies/
- **CCI Dashboard:** Ongoing work in collecting data sources to analyze and display students' core competencies progress.
- **Core@CMU course:** Began design and development of a new required course (replacing C@CM) for first-year students.

# Eberly Center launches 3-year initiative to *measure the impacts* of generative artificial intelligence (genAI) tools on students' learning and educational experiences at Carnegie Mellon University

## The GAITAR Initiative launched in October 2023
*Highlights from academic year 2023-24 include:*

### The Generative AI Teaching as Research (GAITAR) Initiative

Supports instructors as they adapt to generative AI's disruption of the educational ecosystem

Incentivizes and lowers barriers to teaching innovation and TAR across many teaching contexts

Collects rigorous data on learning in CMU courses

Disseminates transferable, evidence-based teaching strategies at CMU and beyond



Adapt → Innovate → Research → Disseminate
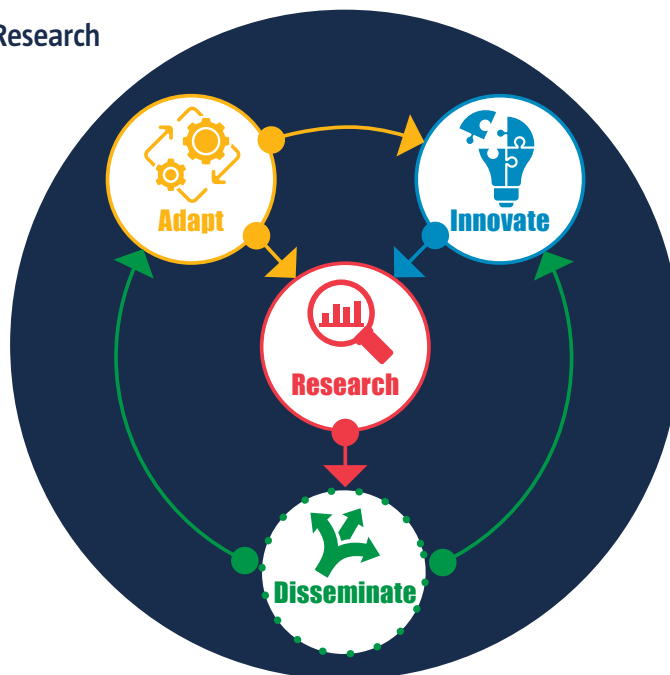
Our events supported adaptation and innovation, **298 faculty, staff, postdocs, and graduate students filled 353 seats**:

- University-wide and customized unit-level Faculty and Graduate Student Seminars: Adapting to Generative AI in the Classroom (F23, S24)
- Faculty Special Interest Group (SIG): GenAI Early Adopters (F23)
- CMU Teaching & Learning Summit: Plenary Session - Spotlight on Early Adopters of GenAI for Teaching and Learning (F23)
- Spotlight on Innovative CMU Teaching: Generative AI (F23)
- GAITAR Fellowship cohort meetings (S24)

## Do GenAI tools increase, decrease, or not change student learning and equity at CMU?

**GAITAR Fellowships include copious in-kind support from Eberly Center teaching, technology, and assessment consultants to design, implement, and measure the impacts of a teaching innovation using a generative AI tool in a CMU course.**

- 59 proposals submitted by CMU instructors of record across two funding cycles.
- 27 projects funded for 25 faculty and 4 graduate students teaching courses in all 7 CMU Schools/Colleges, including the CMU-Qatar and CMU-Silicon Valley campuses.
- 10 courses collected data in S24 with Eberly Center assistance.
- 17 courses designed implementation plans for F24 and/or S25 with Eberly Center assistance.

**The GAITAR Institute provided a "sandbox" to explore the alignment (or lack thereof) of generative AI to one's teaching and learning objectives, imagine innovative applications, and/or design a teaching as research (TAR) study in a CMU course.**

- 26 faculty, staff, postdocs and graduate students attended.
- 4 participants subsequently received GAITAR Fellowships.

## Eberly Center Team

**Leadership Team**

**Chad Hershock, PhD**
Executive Director

**Judy Brooks, MDes**
Director of Design,
Technology-Enhanced
Learning (TEL) &
CMU Online Programs

**Emily Weiss, PhD**
Associate Director,
Faculty Teaching Initiatives

**Jacqueline Pincus, PhD**
Associate Director,
Graduate Student &
Postdoc Teaching Initiatives

**Michelle Pierson**
Business Administrator

**Teaching Consultant Team**

**Sophie Le Blanc, PhD**
Senior Teaching Consultant

**Elisabeth Ellington, PhD**
Senior Teaching Consultant

**Phoebe Cook, PhD**
Teaching Consultant

**Yoko Nakamura, PhD**
Teaching Consultant

**Patrick Walsh, PhD**
Teaching Consultant

**TEL Team**

**Zachary Mineroff**
Senior Learning Engineer

**Harley Chang, Ed.M., M.S.**
Learning Engineer

**Avi Chawla**
Learning Engineer

**Qinglin Feng**
Learning Engineer

**Lynn Kojtek, MSIT**
Learning Engineer

**Xiaolin Ni**
Learning Engineer

**Alex McGough**
Educational Technology
Consultant

**Roberta Serbin**
Educational Technology
Consultant

**Meg Richards**
Senior Systems Software
Engineer

**Martin van Velsen**
Senior Systems Software
Engineer

**Nathan Mazur**
Senior Multimedia Designer

**Data Science Research
Team**

**Michael Melville, PhD**
Senior Data Science
Research Associate

**Laura Pottmeyer, PhD**
Senior Data Science
Research Associate

**Allison Connell Pensky, PhD**
Senior Data Science
Research Associate

**Lydia Eckstein, PhD**
Data Science Research
Associate

*The Eberly Center reports to*

**Marsha Lovett, PhD**
**Vice Provost for**
**Teaching & Learning**
**Innovation**

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# 24