



CENTER FOR EDUCATIONAL INNOVATION AND EXCELLENCE (CEIE)



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InspirED Teaching is a quarterly newsletter published by the Center for Educational Innovation and Excellence (CEIE) at the New Jersey Institute of Technology. Included you will find information on recent and upcoming events, updates on current initiatives, teaching strategies, and more

Contact us! | ceie@njit.edu



Introducing Dr. Jessica Simon – CEIE's New Pedagogical and Instructional Innovation Specialist

Dr. Jessica Simon received her PhD in Neuroscience from Florida State University (FSU) in 2023. She has taught multiple lecture and laboratory courses in person, online synchronous, and condensed six-week semesters, culminating in the Outstanding Teaching Assistant Award

based on her evidence of high quality, innovative undergraduate teaching. She earned a position in the Office of STEM Teaching Activities at FSU directing their Masters in College STEM Teaching Program. She worked one-on-one with STEM instructors, taught graduate classes as instructor of record on learning science, and guided STEM instructors to design effective courses by observing their lessons and providing feedback.

Her research interests in motivation span neuroscience, psychology, and education, which she uses to inform her teaching and mentorship. She has implemented evidenced approaches to teaching including an alternative grading approach in her first author submission, "Specifications Grading in Large and Small Classes" in the Society for the Teaching of Psychology E-book collection. She also has a first author paper in the Journal of Education and Information Technologies with her manuscript "Predictors and consequences of typical and "addictive" LMS use" describing predictors (goal orientation) and consequences (academic performance, stress) of typical and addictive learning management system use. During graduate school, she used electrophysiology (EEG) to investigate effort-related stimulus relevance and stimulus expectations that alter measures of attention and cognition.

She has a deep understanding of pedagogy, psychology, and neuroscience and is eager to serve as a resource for NJIT faculty interested in pursuing excellence and innovation in the classroom. She looks forward to supporting faculty in creating courses that position learners as change makers who use their knowledge to make innovations that benefit humanity #NJITMakes. Beyond her academic interests, she enjoys painting, hiking, cats, and spending time with her family and friends.

Spring 2025 in Review...

Donuts and Discussion: A Sweet Spot for Teaching Conversations at NJIT



This spring, the CEIE's Donuts & Discussion series brought together faculty, instructors, TAs, and instructional staff for rich, informal conversations around teaching practice—all with a cup of coffee and a donut in hand. These monthly gatherings created space for our educational community to connect, share, reflect on current trends, classroom challenges, and innovative strategies. Here's a look at the meaningful moments from the semester:

From exploring how to engage students critically with AI tools to applying real-world strategies in the engineering classroom, each session offered practical insights and fresh perspectives. Dan Estrada opened the series with approaches for fostering critical engagement with generative AI while discouraging plagiarism. Megan LeLay shared strategies to support underprepared students and help them build academic independence. Adam Spryszynski demonstrated how low-tech tools like index cards can be powerful for encouraging participation and collecting meaningful feedback. Jonathan Jaquette led a thought-provoking session on integrating active learning into graduate education, and Swapnil Moon closed the series with hands-on, collaborative approaches to design thinking in first-year engineering.

Each gathering offered space for thoughtful dialogue and peer learning, grounded in a shared commitment to student success. We're grateful to all who presented, participated, and helped make this series a highlight of the spring semester.

Spring Symposium Recap

On March 12th, faculty, instructional staff, and TAs met to discuss an important and timely topic: inclusive teaching. The Spring Symposium titled, "Inclusive Teaching in Action: Practical Approaches for Faculty," was co-hosted by CEIE Director, Nikki Bosca, and Office for Inclusive Excellence Director, Rachel Walker. The session began by having attendees "unpack their invisible knapsack"--highlighting times attendees felt like they didn't belong and the impact of their personal identities in academic spaces. This was a purposeful segue for introducing inclusivity and common misconceptions through reflection on student cases.

Inclusive teaching refers to intentional, research-based practices that create equitable learning environments where all students, regardless of their background, identity, or ability, are able to succeed. The symposium concluded with an important point: "Inclusive teaching is not an all-or-nothing practice. Start small. One change can make a huge impact. Leverage quick wins (strategies that you can apply with little-to-no prep), intentional adjustments (strategies that require some preparation or content revision), and transformative strategies (long-term changes to pedagogy or assessment)." By the end of the workshop, attendees were more inclusive in their thinking and left with evidence-based tools to enhance accessibility, foster diverse perspectives, and support all students' success.

Some attendees were so inspired, they committed to participating in the "try one thing challenge" posed at the end of the symposium—incorporate one strategy they learned that day before the end of the semester. One of the participants, Caroline Devan, even won a prize for her efforts normalizing help-seeking for her students! *Congrats, Caroline!*

CEIE AI Curriculum Grants - Updates!

The CEIE and the Office of the Provost launched the Al Curriculum Innovation Grant initiative during the Fall 2024 semester. After nominating Tier 1 award winners, and witnessing the successful implementation in Spring 2025, the CEIE will bring back the Tier 1 grant for implementation during the Fall 2025 semester. Read on below to see the winners for Tier 2, and the details for Tier 3 grants, which were announced on May 2nd!

Tier 2: Pilot Seed Grant Winners

PI: Elisa Kallioniemi

Department: Biomedical Engineering

Description: This proposal will use AI to personalize learning pathways in digital signal processing by using MATLAB AI Chat Playground as an additional teaching assistant in the course.

PI: Richard Thompson **Co-PIs:** Martina Decker and Raafi Rivero **Department:** Hillier College of Architecture and Design, Art + Design

Description: This proposal will integrate Al-powered text-to-video platforms (Sora, Adobe Creative Cloud) into the Digital Design curriculum by piloting the initiative with students in a summer exploration and a pilot elective course.

Applicant name: Sam Lieber

Department: School of Applied Engineering and Technology

Description: The project will introduce Prompt Engineering into a multidisciplinary engineering curriculum. The proposal provides students with formal training on use of Al in technical communication (e.g., engineering report, proposals) and will make critical strides in developing a prompt engineering curriculum assessment tool.

Tier 3: Transformative Innovation Grants

Purpose: This top-tier grant is for groundbreaking, forward-thinking projects that reimagine teaching and learning through Al. It is intended for complex, high-impact proposals that may need a longer development timeline or larger resource commitment. The CFP for Tier 3 went out on May 2, 2025, and the first round of concept papers is due on June 2nd! Check the CEIE website for full requirements and submission information.

Tier 1 and 2, Round 2! Re-Opening the Calls!

The CEIE is excited to share that the CEIE AI Curriculum Grants will be restarting again this summer, with Tier 1 awards. Please visit the <u>CEIE website</u> for updated information on round 2 for both of these tiers.



Call for Proposals: Inaugural CEIE Summer Experiential Learning Conference

Learning in Action: Experiential Pedagogy, Practices, and Pathways

Date: August 27th, 2025
Time: 8:00am - 5:00pm
Location: Weston Hall. NJIT

Overview:

The Center for Educational Innovation and Excellence (CEIE) is excited to share the call for proposals for the Inaugural CEIE Summer Conference at NJIT, "Learning in Action: Experiential Pedagogy, Practices, and Pathways." We invite university staff, faculty, instructors, and TAs to submit proposals that showcase innovative experiential learning practices and emphasize interactive and engaging delivery methods. Overall, this conference is dedicated to exploring and enhancing experiential learning for our students.

Deadline- EXTENDED: Proposals must be submitted by May 27th at 11:59pm.

Registration Now Open!

We're excited to announce that registration is officially open for the CEIE Summer Conference, "Learning in Action: Experiential Pedagogy, Practices, and Pathways." You don't have to submit a proposal to present in order to join us for a day of learning and engagement, culminating in a practical experience in the MakerSpace for all attendees.

Register now to secure your spot—open until August 1st!

Looking Ahead to Fall 2025

Next fall, the CEIE symposium will center around Service-Learning. Attendees will get to hear from a variety of NJIT instructors who implement this strategy, which is a form of experiential learning that bridges classroom content and theory to community needs and civic engagement. It is a way to meet both course learning objectives as well as societal needs while providing students with meaningful, hands-on learning opportunities. The symposium will feature a panel discussion as well as other opportunities to learn and engage. The event will take place mid-October, soo be on the lookout for a registration announcement!

Fall Donuts & Discussion

Returning once again! Our informal talk series will continue in Fall 2025, alternating on Tuesdays and Wednesdays throughout the semester. D&D provides a chance for faculty and instructors to connect with colleagues and share teaching strategies throughout the semester. Please join us for coffee, a donut, and conversations about education, pedagogy, best practice, current trends, and more! No registration is needed. Just show up and join the conversation! The dates/times, location, and discussion topics will be published over the summer, so make sure to check the CEIE events page for updates!

Consulting appointments

Interested in enhancing your teaching? Starting May 27th, the CEIE will begin offering all NJIT instructors one-on-one or small group consultations in person or online to discuss any pedagogical interest or challenge. Whether you are looking to integrate active learning, redesign assessments, or align your curriculum with neurocognitive insights, these personalized sessions are an opportunity to collaborate, reflect, and refine your teaching. We look forward to serving as your teaching resource. *Please note: faculty consultations are confidential and non-evaluative.*

CEIE Workshops by Request!

Are you interested in developing your department's pedagogy? Is there a shared teaching challenge or theme your faculty would like to explore? The CEIE offers customized workshops by request. We will work with you to design a session that fits the goals and context for your group. Reach out and we will bring the experience to you!



Did You Know? The Brain Changes from Learning

Learning actually reshapes the brain's structure and function, a phenomenon known as neuroplasticity. Have you heard the saying, "Neurons that fire together, wire together?" Every time you learn something new, retrieve

information, and apply it, your brain forms new connections between neurons, strengthens existing ones, and sometimes prines away less-used pathways to become more efficient.

Source:

Hebb, D. O. (1949). The organization of behavior: A neuropsychological theory. Wiley.

Owens, M. T., & Tanner, K. D. (2017). Teaching as brain changing: Exploring connections between neuroscience and innovative teaching. *CBE—Life Sciences Education*, 16(2), fe2. https://doi.org/10.1187/cbe.17-01-0005

Shatz, C. J. (1992). The developing brain. *Scientific American*, 267(3), 60–67. https://doi.org/10.1038/scientificamerican0992-60

Try-One-Thing Challenge: Normalizing failure as part of learning

Both faculty and students experience failure: a rejected manuscript, a failed exam, a buggy line of code, a mistake at the lab bench. Every professor has a story of struggle they had to overcome. Yet, students are usually unaware of the productive struggle of their professors, and most view their own failures negatively.



We challenge you to normalize failure as part of learning by giving a brief presentation on a time you failed in research or teaching.

How it works:

- 1. Share a time in your academic career when you experienced failure and share:
 - How did you feel at the time?
 - What helped you move past that experience?
 - Did you try it again-what was the outcome?
 - · How do you view that experience now?
- Have your students then reflect on the same questions. Offer prompts such as:
 - Failing a test or class.
 - Struggling with time management.
 - Not getting a research position or internship.
- 3. Have students share and discuss. Use an anonymous poll to lower the stakes, and invite volunteers to share if comfortable. Consider using small groups or one-minute papers to encourage reflection. You may encourage students to discuss how they could learn from that failure experience (e.g., study further in advance, identify resources for improvement, or adopt a planner).
- 4. Notmalize it! Acknowledge that failure is part of the learning process, and that any professor you see has been through similar challenges.

Why Normalizing Failure Matters

- Build Belonging: Students feel less self-conscious and more connected to their academic journey.
- Promotes Resilience: Seeing failure as feedback, not finality, empowers students to keep going. Process> Product.
- Reframes Expertise: Becoming an expert means being willing to fail, learn, and try
 again.
- Supports Struggling Students: Normalizing failure opens the door to support and resources- encourage office hours, tutoring, or reaching out to campus resources (e.g.,

Office of Accessibility Resources and Services or Center for Counselling and Psychological Services)

Don't have enough time for an in class discussion?

Consider sharing a "CV of Failures". CV tend to demonstrate our successes (the one published project that worked), and do not mention the failures (the six projects before, that didn't work). This might inspire your students to try again, and again, and that failure is a productive part toward an end goal. It's a powerful message: success is built on persistence.

Source:

Ajjawi, R., Dracup, M., Zacharias, N., Bennett, S., & Boud, D. (2019). Persisting students' explanations of and emotional responses to academic failure. *Higher Education Research & Development*, 39(2), 185–199. https://doi.org/10.1080/07294360.2019.1664999

Stefan, M. A CV of failures. *Nature* **468**, 467 (2010). https://doi.org/10.1038/nj7322-467a



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