Preparation for the STEM Classroom: An Introduction to Evidence-Based STEM Teaching

Designed for PhD students and Postdocs planning for academic careers in the STEM disciplines, this course provides an introduction to the alignment model, evidence-based teaching practices, and the basics of teaching-as-research (TAR) project design. Interested faculty are also welcome to join.

Graduate and professional students, postdocs, and faculty can participate in this course by either registering for graduate credit using one of the courses listed below, or by auditing the course (not taken for graduate credit) using the link below.

Cross-Listed as:

- ENGR 3001-1160 (CRN #21925)
- BIOSC 3001-1160 (CRN #22972)
- CHEM 3001-1095 (CRN #24063)

Audit (Not for Credit) Registration

Complete this form to participate without credit or if you also plan to register for graduate credit:

[https://forms.gle/76GTVuK9ecRmh2T48](https://forms.gle/76GTVuK9ecRmh2T48)

Class Times:

Class meets Tuesdays, 4:00 – 4:50 PM in Benedum 320, and begins Aug 31st.

* Satisfies the course requirement to earn Pitt-CIRTL Associate Certification in STEM Teaching (1st level).
Registration for fall programming is now open! Courses and workshops have limited capacity and require advance registration; MOOCs and events have no cap but participants are still required to register to get access to online materials (for MOOCs) and sessions (for events).

Check https://www.cirtl.net/ for updates.

Online Courses

The College Classroom
Wednesdays, 2:00-3:30PM ET September 29 – December 15, 2021
Get an introduction to key learning principles and the basics of effective, evidence-based teaching practices in this course about teaching in the college classroom. This course will focus on developing inclusive, learner-centered approaches to teaching. Students will explore the interconnectedness of learning objectives, assessment, and learning activities through both discussion of course materials and developing and practicing their own lesson plan. In this course, you will:

• Explore inclusive, learner-centered teaching theories and practices
• Read and discuss literature on effective teaching and learning, and apply to your teaching practice
• Create connections between learning objectives, assessments, and learning activities in order to build and teach a lesson plan
• Reflect on personal teaching values and decision making

Massive Open Online Courses (MOOCs)

CIRTL MOOCs take place on the EdX platform and use video-based modules, discussion boards, and peer-reviewed assignments to teach participants about different aspects of evidence-based STEM teaching over the course of 8 weeks. Registration is required; there is no cost to participate and no enrollment cap. For more information, visit the CIRTL MOOC website.

An Introduction to Evidence-Based Undergraduate STEM Teaching MOOC (Registration TBD)
Asynchronous Course September 27–November 21, 2021
The course draws on the expertise of a variety of STEM faculty, educational researchers, and staff from university teaching centers, many of them affiliated with the CIRTL Network. Topics include key learning principles, such as the role of mental models in learning and the importance of practice and feedback; fundamental elements of course design, including the development of learning objectives and assessments of learning aligned with those objectives; and teaching strategies for fostering active learning and inclusive classroom environments. Formats include video content and transcripts, readings, discussion forums, quizzes, and peer-graded assignments where participants will plan teaching and learning activities relevant to their disciplines.
Network Workshop Series

**Workshop Series: Exploring Careers in Teaching at a Community College**
Learn about teaching at community colleges straight from current staff & faculty! In this three-part series, we'll hear faculty & staff reflect on the joys and challenges of teaching at a community college, the broad diversity of students in their courses and how that diversity enhances learning, and the ins and outs of finding a full-time teaching position at a community college. The panelists will take questions from future faculty throughout the presentation.

**Introduction to Teaching at a Community College**
1:00 – 2:30 PM, Tuesday, October 5, 2021
Have you ever considered a teaching career at a community college? This career can have a high impact on students beginning their higher education journey and often includes a strong community focused work environment. The panel of faculty will discuss their experiences working in community colleges. The discussion will include equity and diversity at community colleges, panelists career trajectories, what they appreciate most about working at community colleges, and common misconceptions about the career. Bring your questions and prepare to explore this wonderful career path.

**Getting Hired at a Community College: Tips and Strategies from Faculty on Hiring Panels**
1:00 – 2:30 PM, Tuesday, November 2, 2021
Learn hiring tips from faculty that serve on or work closely with hiring committees at community colleges. How might the interview differ from that of a 4-year teaching or research university? What factors should you consider in preparing your application materials and teaching demonstration? What are some common do's and don'ts of seeking a job at a community college? Join us to learn the answer to these questions and more.

**Equity, Diversity, and Inclusive Teaching in the Community College Setting**
1:00 – 2:30 PM, Tuesday, December 7, 2021
Community colleges are truly diverse settings, attracting individuals from all different walks of life with a common interest in advancing their education. If you are interested in exploring a career at a community college, then understanding the diversity of their student populations is crucial. This panel consisting of faculty and administrators from various community colleges will share insights on student diversity. We will also explore the types of inclusive teaching strategies that best support community college students and help to create more equitable classrooms.
Teaching Citational Practice: A Critical Feminist Approach (2 day workshop)

11:00 AM – 12:30 PM, Wednesdays, October 13 and October 27, 2021

What effects do citational practices have on students’ understanding of who does and doesn’t belong in our field? What is the impact of the ‘stories’ we tell our students through our syllabi, footnotes, and bibliographies? How can we transform our own citational practice in order to empower the most vulnerable or excluded voices in our fields? In this two-part workshop, we will explore how, as educators, we can meaningfully legitimize overlooked or non-traditional sources of scholarship while breaking down biased norms of who belongs in labs, at the front of the lecture hall, and in our syllabi. In our first session, we will introduce critical feminist pedagogy as a framework for assessing the political and ethical implications of academic citation, both generally speaking and in your home departments and disciplines. In our second session, you will develop and workshop a pedagogical resource for enacting a critical-feminist approach to citational practice in your own classrooms and learning materials. If you are interested, at the end of the workshop you’ll be able to contribute your newly-designed resource to a STEM-focused issue of the Open Educational Resource (OER) Teaching Citational Practice: Critical Feminist Approaches, hosted by Columbia University Libraries.

Network Workshops

Research, Teaching, and Mentoring at MSI/HBCUs

3:00 – 4:30 PM, Thursday, October 7, 2021

Hear faculty from Minority Serving Institutions (MSIs) and Historically Black Colleges and Universities (HBCUs) share their perspectives on being faculty at different types of institutions that serve diverse student populations. Each faculty panelist is associated with a partner institution as part of the Institutional Research and Academic Career Development Awards (IRACDA) Program funded by the National Institutes of Health (NIH). Faculty names and affiliated institutions will be added as they are identified.

Bring An Inclusive Mindset to Your Teaching

11:00 AM – 12:30 PM, Friday, October 8, 2021

Learn about inclusive teaching approaches that build upon inclusive design frameworks, case studies, and educational research in this one-session workshop. As an introduction to inclusive teaching techniques, Professors Kelly Hogan and Viji Sathy of the University of North Carolina will ask participants to reflect on inequities and diversity in their classrooms through interactive activities. After providing a framework for inclusive design and their own research results, Hogan and Sathy will lead participants through active learning exercises and case studies that explore inclusive techniques. Drawing upon their own teaching experiences and educational research, they will model and discuss approaches that can be readily implemented with any discipline or class size to help all students achieve to their potentials.

LinkedIn for Academics

12:00 – 1:30 PM, Tuesday, October 12, 2021

You have a LinkedIn account and the basics set up; now what? Wait for people to find you? No. “Networking” is an active process that takes time and planning. After attending this workshop, you will understand: 1) Why LinkedIn is used for the recruitment and vetting of candidates 2) The importance of skills and keywords and how they are essential to your LinkedIn profile 3) How to reach out to an individual on LinkedIn 4) Begin to appreciate the many ways to use LinkedIn for networking and job-seeking 5) How faculty/academia can use LinkedIn for network.

**dB-SERC Lunch Discussion**  
12:00 - 1:00 PM, Tuesday, September 7, 2021  
Dr. Renee Cole from the University of Iowa will give a talk titled "Building a Path to Success: Improving Learning Experiences through Constructive Alignment of Course Components". The abstract is below:

Many instructors approach to course design is focused on content without explicitly considering the intended outcomes (what students should know and be able to do), how knowledge and skills will be developed through instruction, or how each intended outcome will be assessed. By ensuring that learning outcomes, assessments, and instructional actions are aligned, instructors provide students with coherent curricular opportunities to develop their knowledge and skills and increase the likelihood that instructional actions are appropriate to achieving the desired learning outcomes. Before instructors can align these curricular components, they must first reflect on each of these components individually and how they can support student success. When designing learning outcomes, instructors must have a clear picture of the knowledge that students should gain and determine the performance expectations, which relates to how students should demonstrate their knowledge. These outcomes must also be clearly articulated so that students understand what is necessary for success in a course or activity.

Marzano’s taxonomy provides a useful (and practical) way to think about developing learning objectives, activities, and assessments. The levels are based on the degree of cognitive control or intentionality of the thought processes needed to complete a task. Well-designed learning objectives serve many purposes: they guide curriculum development, guide assessment, and help students direct and monitor their learning process. With the increased emphasis on creating active learning environments to better support student learning, it is important to consider what aspects of activity design and implementation are effective in supporting student learning. We have used Marzano’s taxonomy to characterize instructional tasks from a variety of contexts and have extended this work to analyze classroom discourse to investigate how task design can influence student engagement. This work provides insights into how instructors can design and align course components to develop more effective learning environments.

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**University Center for Teaching and Learning**

Check [https://teaching.pitt.edu/workshops-events/](https://teaching.pitt.edu/workshops-events/) for updates.

**What's New in Canvas?**  
2:00 - 2:30 PM, Tuesday, September 2, 2021  
This 30-minute webinar will highlight new features and changes that have taken place in Canvas since the end of the spring term, as well as how to get more information and how-to instructions for new tools.

**Active Learning with Top Hat Classroom**  
11:00 AM - 12:00 PM, Wednesday, September 9, 2021  
Top Hat's student engagement software is available for all faculty and students at Pitt to use free of charge. This workshop serves as an introduction to Top Hat’s suite of tools, focusing on the most commonly used functionality: student polling and live discussions. No prior experience with Top Hat is necessary for this workshop.
Maximizing Mentee Experience
3:00 - 4:30 PM, Wednesday, September 15, 2021
Mentoring relationships are an essential part of any career journey but they are not always easy to navigate, particularly in the role of the mentee. During this session, we will provide you with guidance regarding how to cultivate a mentoring network, what it means to be a mentee, how to identify and cultivate new mentors, what makes for a successful mentor/mentee relationship, and how to manage a multitude of difficult situations that may arise in these relationships.

This session will be interactive, so please be sure that you are in an environment that will allow you to engage verbally and come prepared with any questions you may have!

Center for
Doctoral and Postdoctoral Career Development

Check https://calendar.pitt.edu/department/office_of_academic_career_development for updates.

First Gear Commercialization Course
3:00 - 5:30 PM, Thursdays, September 2 – October 21, 2021
First Gear is the Innovation Institute's premier introductory commercialization program. Through a series of six workshops, participants discover the commercial potential of their innovation by conducting interviews with potential customers.

An experienced business mentor helps guide this process which results in a the creation of a value proposition for the innovation and a polished pitch for potential investors or license partners.

Each team receives $3,000 to assist in market research and customer discovery.

Leading People In Organizations Micro-Credential
Application deadline: September 7, 2021
Classes begin Tuesday, September 7, 2021.
This professional credential consists of four Master of Business Administration (MBA) courses. Gain the knowledge and skills that are needed to thrive in any career, as well as the verification that you’ve earned them.

Cultivating a portfolio of professional skills during your postdoctoral training will provide you with a significant competitive advantage over your peers when you are ready to enter the job market, regardless of your career goals.

Micro-credentials are cost-effective, mini-qualifications that offer immediate value!
This professional credential will introduce emerging scientists and scholars to the essential managerial and communication skills valued and sought after by employers across all sectors of the workforce. The certification of the completion of this professional credential is provided by University of Pittsburgh Katz Graduate School of Business (KGSB).

If you have any questions, email OACDGradCourses@pitt.edu or call (412) 648-8486 to speak with an advisor.
Check [https://www.diversity.pitt.edu/](https://www.diversity.pitt.edu/) for updates.

**Black Lives in Focus: The Exhibition Opening**

6:45 – 7:30 PM, Thursday, September 9, 2021
What do we learn when Black life is in focus? Celebrate with us in launching this outdoor exhibition of artists’ and writers’ response to this question. The exhibition is part of a broader Pitt initiative, Black Lives in Focus, to lift up and explore the Black experience as essential to our community’s future.

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**Additional Resources:**

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