

Special Topics Classes - Spring 2024

EDUC 269N: Breaking Barriers and Increasing Equitable Access in STEM

“STEM Education Race and Language Challenges”

Instructor: Cathy Lussier

Description: STEM education can inspire and prepare all students to seize the opportunities of the global society through innovation, inquiry, collaboration, and creative problem solving. However only 20% of graduating high school students nationwide have been found to be adequately prepared and confident enough to pursue STEM coursework at the college level. Additionally, only 40% of STEM college students who do continue on in the STEM pathway persist until degree completion. Females and underrepresented groups leave that STEM pipeline faster than their male and white counterparts. Why? And what type of strategies can help students persist and thrive? This is a STEM education survey course exploring the racial, cultural, and linguistic challenges and perspectives that impact both teaching and learning in STEM subjects. This course includes exploration of the research interventions that can broaden cognitive processing, understanding and participation at the K-12 and post-secondary college levels (e.g., impact of working memory load on multilingual learners, impact of visualization on reducing cognitive barriers, teacher influence, science identity and sense of belonging, etc.).

Course purpose: assist masters and doctoral students in the development of their evidence-informed research project; and develop conference presentation materials and submission items on their research. *Note* - both will be done in consultation with their faculty advisor.

EDUC 269N: Mindfulness Approaches to Writing Higher Education Research

Instructor: Michael Moses

Description: The topic of academic writing often begets frustration, unease, and other negative feelings partly because writing is a required skill of the academy that is rarely taught as a craft deserving of ongoing maintenance and reflection. This course works to disrupt this culture by centering asset-centered and critical race approaches to academic writing as a process and practice of a writer's humanity. Each week's class session will consist of three components: 1) students will discuss weekly readings that reframe writing as process (rather than product) and tool for anti-oppressive work in the academy, 2) students will learn how to and practice giving and receiving constructive and writer-centered feedback on their ongoing writing projects, 3) students will journal about the drafting and revising process of their ongoing writing projects. By incorporating literature about writing (Chavez, 2021; Sword, 2016) and critical race counterstorytelling as methodology (Solórzano & Yosso, 2002), this course will equip students with a skillset to move beyond common writing paralyzes and, instead, reframe writing as a process and act of intellectual and personal pleasure.

Course purpose: assist MED students in the writing of their analytic papers. Note: analytical paper will be finalized with assigned faculty advisor in a later academic term. ***Course counts towards MED Higher Ed elective.***