ED 220: Changing Pedagogies in Math and Science Education
Spring 2022: Thursday 7:10-10:00pm
Professor Donnay

Description: This praxis course will examine research-based approaches to teaching mathematics and science. What does research tell us about how people learn? How can one translate this learning theory into teaching approaches that will help all students learn mathematics and science? How are these new approaches, that often involve active, hands-on, inquiry-based learning, being implemented in the classroom? What challenges arise when one tries to bring about these types of changes in education? What is the regional, state, national and international context for math and science education? How do issues of equity, discrimination, and social justice impact math and science education?

The course will meet once a week (Tuesday 7:10-10pm). My aim is to run the class as a “Learning Community” in which we share our perspectives and experiences, learning together and from one another.

Field Placement: Students in the course will each have a field placement with a local K-12 or college educator or other type of educator who is engaged in some aspect of innovative educational practice in math or science. Students will observe and assist their host educator for a total of 4 - 6 hours per week, typically 2 visits per week, for a minimum of 8 weeks. Student and host educator will together determine what form the assistance will take.

A key aspect of the course will be making connections between the theoretical material we study in class and students’ practical experiences in the field.