School of Education & Professional Studies Seminar
“Disciplined Inquiry in Education”

Research in a Learning Environment:
Bridging the Gap in the Chemical Sciences

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12:00 Noon, 300 Satterlee Hall

Abstract:
Research at an undergraduate institution enhances the educational experience of science undergraduates, attracts and retains talented students and acts as a pathway for minority students into science careers. Studies have shown that students who participate in original research projects are significantly more likely to pursue advanced degrees in science and engineering disciplines. Albert Einstein once reasoned “It is not so very important for a person to learn facts. For that he does not really need a college. He can learn them from books. The value of an education in a liberal arts college is not the learning of many facts but the training of the mind to think something that cannot be learned from textbooks”. Thus, research and education are highly integrated and inquiry-based method is the best way to teach science. Traditional classroom lectures without laboratory components or hands-on experience often lead students to classify science as boring, nerdy and rather difficult. Incoming undergraduate students lack confidence, an attribute that often inhibits creativity. In my experience working with undergraduates, this lack of confidence and creativity can be easily overcome if students are given the opportunity to conduct undergraduate research, whether during the regular academic year or even better during summer. Not only will the students’ confidence and creativity improve but their laboratory acumen and thinking skills as well.

This seminar will focus on the research performance of undergraduate students in my research laboratory over the past few years. A brief introduction of my research program in the chemistry department at SUNY Potsdam will be given followed by a highlight of recent achievements and snapshots of students’ scholarly activities and presentations at various scientific meetings.