The persistence, participation, and retention of students in STEM fields is an issue of growing concern in the United States. With the large numbers of STEM majors not completing their degrees, there are concerns that there will soon not be enough workers to fill the increasing demand in STEM fields. My research focuses on the use of evidence-based practices to promote persistence, participation, and retention of students in STEM fields. In my talk, I will share how the implementation of one evidence-based approach in a general chemistry laboratory helped students improve their critical thinking as well as their examination performance, leading to their retention in chemistry. I will also briefly discuss an evidence-based process of developing and validating tasks for assessing students’ proficiency in the scientific and engineering practices, and the potential of these assessment tasks for helping students persist, participate, and remain in STEM fields. I will conclude by discussing future plans for using evidence-based practices in promoting persistence, participation and retention in STEM fields, particularly among members of underrepresented groups (including women, first-generation and socioeconomically challenged students) in the health sciences.

Monday, January 13, 2020
1220 Chemistry Building
3:30 p.m.