

# *Chemical Education and Outreach beyond Broader Impacts*

**Dr. Nancy Ruzycki**

Materials Science and Engineering  
University of Florida



**Chemistry  
Seminar on  
Chemical  
Education and  
Outreach**

**4:00 p.m.  
Monday  
Sept 27  
Via Zoom**

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**Abstract:** Academics often engage in broader impact efforts related to their research work designed to excite K12 students about science, but these efforts rarely result in any academic benefit for the student or teachers in the immediate community. How can graduate students and academic faculty design broader impact activities which benefit students and teachers and help to build your profile for authentic broader impact?

Being able to align authentic broader impact to research goals requires development of a logic model and use of system thinking practices to ensure there are measurable outcomes for activities at the student and teacher level in addition to having meaningful alignment to research projects. This talk will showcase the landscape of K12 opportunities and how you can create a logic model which addresses and aligns activities and outcomes. These logic models are also appropriate for use in NSF proposals.

**About the speaker:** Nancy Ruzycki holds a PhD in Physics from Tulane University and currently is an Associate Instructional Professor at the University of Florida Department of Materials Science and Engineering where she designs and teaches laboratory experiences for students. Ruzycki has a 5 Million Dollar Department of Education grant related to professional development of K12 teachers for STEM instructional practices and some foundation grants for training teachers for integrated ML and AI practices. She does research into professional development of teachers for use of technology, inquiry, modeling conceptual development. Ruzycki also designs jupyter notebooks for use in classes for data science applications of materials science and engineering.