



Dr. Charlie Cox's primary interests lie in the field of chemical education, and in bringing cutting-edge science into the undergraduate classroom. He focuses on methods to promote active learning in organic and general chemistry, targeting improvements in problem solving, critical thinking and retention.

Charlie T. Cox was born in North Carolina in 1980. He took a strong interest in chemistry beginning in high school. As an undergraduate at North Carolina State U. (B.S. 2001) he explored research in biophysical chemistry, analyzing proteins with differential scanning calorimetry, and participated on a chemical education project focused on SCALE-Up curricula. His doctoral study at Clemson U. (Ph.D. 2006) required two projects—one chemistry-based and another education-oriented. He completed the first in a physical organic research group analyzing fullerenes and porphyrin derivatives. For the latter, he worked with Dr. Melanie Cooper, developing interventions in general and organic chemistry and evidence-models to support curricular reform. He also collaborated with Dr. Ron Stevens, applying IMMEX software for assessment of chemistry learning and problem solving (www.immex.com). Charlie's postdoctoral work in chemical education at the University of New Hampshire further motivated him to seek a career in teaching. He has taught general, inorganic, advanced organic, and analytical chemistry, as well as teaching methodology. He joined the Stanford Department of Chemistry in 2010, and is currently Lecturer of Chemistry and Coordinator for T.A. Teaching and Safety Training.

Charlie teaches undergraduate general, organic, analytical and biochemistry. His research and course development emphasize techniques to promote active learning, including the use of flipped classrooms and case studies to improve learning and retention. In addition, Charlie serves as a pre-major advisor for freshman and sophomores, helping students with course selection, internship planning, and options for study abroad and research experience. He also serves as a chemistry major advisor and the chapter advisor for the social chemistry fraternity Alpha Chi Sigma.

Charlie Cox - Statement

As a lecturer, I am very interested in working on activities to further educational reform and opportunities. I am strongly interested in contributing to events related to education, as well as, activities aimed to further safety reforms and guidelines. Specifically, I am interested in designing reforms for high schools, particularly under-resourced schools, to promote an interest in chemistry and STEM fields. While those are my primary interests, I am strongly interested in contributing my efforts to any local division activities. I have been actively involved in the international activities activities and exams institute for the division of chemical education of the national branch, and I am also the chapter advisor for alpha chi sigma which is aimed at bring chemistry majors and professionals together.