

Stephenson School of Biomedical Engineering Seminar Series Presents

## Problem-based Learning in Engineering Education



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Georgia Tech

**Friday, September 14, 2018**

**1:00 PM**

**Rawl Engineering Practice Facility, Room 200**

**Dr. Wendy C. Newstetter**, Assistant Dean for Educational Research and Innovation in the College of Engineering at Georgia Tech, is a cognitive and learning scientist. She has conducted studies of learning in interdisciplinary research laboratories, maker spaces and classrooms. She was instrumental in the development of a problem-based learning (PBL) curriculum in the Department of Biomedical Engineering, recognized by the Georgia Board of Regents as the 2013 Department of Teaching Excellence. She co-authored *Science as Psychology: Sense-Making and Identity in Science*, which won the American Psychological Association William James Book Award in 2012. She served as Senior Associate Editor and Special Issues Editor for the Journal of Engineering Education from 2008-2012.

Problem-based learning (PBL) is an educational approach first designed to solve a problem in medical education. While medical students were successful in memorizing prodigious amounts of information in the first two years, they were unable to apply this knowledge in the clinical setting. PBL was designed to rectify this problem. Thirty years later, this approach is now found in many STEM educational contexts and has only recently started to make in-roads into engineering education. Over the last fifteen years, Georgia Tech has developed a PBL-driven curriculum in biomedical engineering and has since seen this approach migrate to aerospace and mechanical engineering. This talk will cover the basics of PBL, show example problems and also present new “spin-off” models for engineering education that have come from experimenting with PBL in engineering education.