University of South Carolina
Department of Biological Sciences

MCDB/BER Biology Graduate Student Research Seminar

Eric Goff

"Applications of Multimedia Resources Developed as Part of the Virtual Cell Animation Collection in Undergraduate Introductory Biology"

Abstract:
Calls for reform in undergraduate STEM education have risen from an increased need for well-trained biology graduates in the future scientific workforce. To address this need, many institutions have focused on a pedagogical restructuring of instructional practices to promote deeper conceptual understanding of core biological concepts. Our research investigates the implementation of multimedia resources as a possible reliable supplement to the undergraduate introductory biology framework and aims to provide empirical evidence on the instructional best practices of their use. As a central part of this study, we focus on one specific multimedia package, the Virtual Cell Animation Collection, due to its developmental adherence to research-supported multimedia design guidelines. Using resources from this one central source, we focus on the implementation of dynamic animations in biology instruction from three uniquely different classroom perspectives. The focus on introductory biology instruction from the aspect of inside the classroom, outside of the classroom, and independent of the classroom provides an encompassing view of the major settings for student concept introduction. In this seminar, I will demonstrate the efficacy of these resources across multiple introductory topics and devoid of contribution from a number of extraneous variables previously in the literature. Together these results provide empirical evidence for the use of multimedia resources in the introductory biology classroom, ultimately answering the call for reform and redesign in the undergraduate STEM classroom.

Seminar:
Monday – March 20, 2017
2:00 – 3:00 PM
Location: CLS 110