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Angela B. Shiflet* (shifletab@wofford.edu) and **George W Shiflet** (shifletgw@wofford.edu), Wofford College, 429 N. Church St., Spartanburg, SC 29303. *Modeling the Spread of Disease in Undergraduate Microbiology.*

Most college courses in microbiology, or the study of microorganisms, emphasize the biology of bacteria and viruses, including those that are human pathogens. Introducing students to epidemiology, which considers the causes, dispersal, and control of disease, is a challenging aspect of the course. Disease transmission models have helped develop successful strategies for managing epidemics, but most science students are unaware of their advantages and complexities. To address this challenge, the microbiology course at Wofford College has incorporated a sequence of four laboratories on modeling the spread of disease. After a tutorial on using a system dynamics software tool, students in pairs investigate various diseases, develop models of the spread of those diseases, present their work, and write an analysis of the results. Students in Wofford's Emphasis in Computational Science, who have studied in depth modeling and simulation with application to the sciences, serve as laboratory assistants and mentors. Evidence from test scores and self-assessment support the hypothesis that this sequence of laboratories improved student understanding of human disease dynamics and demonstrated the utility of mathematical models. (Received September 22, 2009)