

1035-00-1101      **John B. Geddes\*** (john.geddes@olin.edu), F. W. Olin College of Engineering, 1000 Olin Way, Needham, MA 02492, and **Mark H. Somerville**. *Modeling, Simulation, and Analysis at Olin College of Engineering.*

At Olin College we have developed an integrated first-year course sequence in modeling, simulation, and analysis of physical systems to replace a traditional first year calculus and physics sequence. Using modeling and simulation as a unifying theme, students explore and learn concepts and tools from single and multi-variable calculus, introductory ordinary and partial differential equations, and mechanics and electromagnetism, while simultaneously developing communication and research skills. The courses are largely project-based, and are conducted in an interesting design studio environment that facilitates collaborative learning. In this talk we will discuss both the intellectual foundations of the courses and our pedagogical approach. (Received September 18, 2007)