

1135-34-3196

Ted Theodosopoulos* (ttheodosopoulos@nuevaschool.org), 131 E. 28th Ave., San Mateo, CA 94403. *Modeling challenges for a high school course on differential equations.*

We present an advanced semester-long elective course for high school students that introduces elements from the theory of ordinary differential equations in an inquiry-driven environment through a sequence of modeling challenges. The challenges are drawn from across the physical, life and social sciences, and engineering. The topics investigated include first order equations, linear higher order equations and dynamical systems. The techniques that we explore include power series approximations, transform methods and phase diagrams. (Received September 27, 2017)