1116-K1-294 **James Walsh*** (jawalsh@oberlin.edu). *An ODE-based climate modeling course.*

Conceptual models of climate provide for a host of interesting and relevant mathematical modeling experiences for undergraduates. After recounting my incorporation of climate modeling into the sophomore-level ODE course, I will discuss successes and failures encountered when I recently offered a junior-level mathematical modeling of climate course. As a group we carefully analyzed two models—a surface temperature-ice sheet coupled model and a model of the Atlantic Overturning Circulation—while introducing topics from the qualitative theory of ODEs as needed (and relying fairly heavily on *Mathematica*). Students devoted the latter part of the semester to independent research projects, culminating in both a paper and a presentation.

Colleagues from each of the Physics and Chemistry departments at Oberlin kindly gave guest lectures. I also benefited from discussions with a colleague in our Geology Department. It is not difficult to envision a course such as this evolving into a team-taught enterprise, to the benefit of students and to each participating faculty member. (Received August 23, 2015)