William M Kinney* (bkinney@bethel.edu), Bethel University, 3900 Bethel Drive, P.O. 95, St. Paul, MN 55112. Flipping the Classroom and Mathematica-Based Modules in Complex Analysis. Preliminary report.

I have a long-term goal to “flip” many of the mathematics courses I teach, meaning that content is delivered outside of class through videos, while in-class time is spent working on active-learning modules. The modules I construct have a special focus on using Mathematica to help students in important learning tasks: constructing simulations to explore, making and testing conjectures, and understanding topics more deeply. This presentation will illustrate some of these modules, some of which involve animating figures in Tristan Needham’s book, Visual Complex Analysis. I will also invite interested people to join me in this work as a collaborative project to help revitalize the teaching of Complex Analysis at the undergraduate level. (Received August 28, 2014)