1116-K1-2831 **Joel Kilty*** (joel.kilty@centre.edu), 600 W. Walnut Street, Danville, KY 40356, and **Alex M McAllister** (alex.mcallister@centre.edu), 600 W. Walnut St., Danville, KY 40356.

Mathematical Modeling and Applied Calculus.

In the modern world we are inundated with data. As mathematicians, we are typically more comfortable discussing the behavior of functions presented analytically, in contrast with data-driven or tabular presentations. In this talk, I will present an approach to an entry level Mathematical Modeling and Applied Calculus course for students who will only take one mathematics course in college. The course is designed to develop the student's ability to model data with elementary functions and then improve their models using the Method of Least Squares, which is fully developed in the course. The tools of Calculus are then used to analyze these models in both the discrete and continuous contexts. Students are exposed to many elements of the modeling cycle including the need to refine their models in light of new data. (Received September 22, 2015)