1106-VT-2182 **Joel M Kilty*** (joel.kilty@centre.edu), Centre College, 600 W. Walnut Street, Danville, KY 40422. *Blending Mathematical Modeling and Calculus: A Data Driven Approach to Calculus.* Preliminary report.

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 present a data driven approach to Calculus 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. The tools of Calculus are used to analyze these models in both the discrete and continuous contexts. The software package R, with the *mosaic* package, enables the success of this approach, including the analysis of "real" data sets. (Received September 16, 2014)