

1086-N5-649

**Donna Beers\***, Department of Mathematics and Statistics, Simmons College, Boston, MA 02115.

*Using the Equivalence Kernel of a Function to Strengthen the Teaching and Learning of One-to-One Functions and Equivalence Classes in Discrete Mathematics.*

This presentation will describe the revisions we made, in fall 2012, to a discrete mathematics course for mathematics majors in order to strengthen student understanding of one-to-one functions as well as equivalence classes. Our long run goal is to prepare students for the study of quotient structures in advanced courses such as modern algebra. Our approach was to introduce the concept of the equivalence kernel of a function. We will describe curricular enhancements we developed, including use of non-numerical functions arising from students' own classroom experience, plus visualizations of the equivalence classes corresponding to the equivalence kernel for each of the functions. We will report on the results of a pre- and post-survey that we developed and administered to assess the effectiveness of these enhancements. (Received September 10, 2012)