

1106-VT-2448 **Ryan Grover*** (ryan.grover@colorado.edu). *“I Used to Hate Math. Now I Hate it Even More!”*
Undergraduate Calculus I Students’ Perceptions of Mathematics: A Look at Survey Responses.

This study looked at various first-semester calculus courses intended for different student populations (e.g., biology majors and business majors) taught at a large university. Students enrolled in these Calculus I courses were asked to complete pre and post surveys on their perceptions and understanding of mathematics. Differences in student responses were then analyzed as a whole and through gender and other demographics and compared between the various calculus courses and to national data. Of particular interest is how students’ views change over the semester, especially towards the constructs that make up the surveys: personal interest, real world connections, problem solving confidence, sense making, and conceptual understanding. Survey items and results will be shared. Notable analysis includes large differences in male and female shifts in problem solving confidence in Business Calculus, suggesting that women were much more likely to self-report a decrease in their confidence in solving problems.

By analyzing how student perceptions towards mathematics change, both within these constructs and as a whole, over time, we can begin to understand their motivation to learn mathematics and how our courses may impact those changes. (Received September 16, 2014)