Self-efficacy (Bandura, 1977), an individual’s belief in his or her ability to succeed at a specific task, is a predictor of student performance and persistence in mathematics (Pajares & Miller, 1994; Zeldin & Pajares, 2000). Thus, it is important to understand how students’ self-efficacy changes in different settings. When designed carefully, certain mathematics learning environments are more conducive to students’ development of self-efficacy as they allow for multiple self-efficacy opportunities (Sawtelle, Brewe, & Kramer, 2012). Flipped classrooms (Lage, Platt, & Treglia, 2000) reverse traditional classroom lecture and out-of-class assignments and may increase self-efficacy, as students have opportunities for collaborative problem-solving and instructor feedback during class time. The purpose of our study was to investigate changes in students’ self-efficacy in a flipped Calculus II course taught in an “Active Learning Classroom.” Quantitative findings included significant increases in students’ self-efficacy in calculus. Qualitative findings revealed that students believe their previous mathematics courses and active learning opportunities impact their mathematics self-efficacy. (Received July 07, 2019)